

Chemical Analysis Report

NE-DIST-2021-08-12-01

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

Event Description: **Alligator 3598C SCI**
Request ID: **RQ-2021-07-26-25**
Customer: **NE-DIST**
Project ID: **SMP**

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8800 Baymeadows Way West
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Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant

Date Certified: 07-SEP-2021 09:32



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: Calf Creek 0.5mi Upstream of SE27th

Collection Date/Time: 08/11/2021 10:40

Field ID: G1NE0934

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2269254	EPA 180.1 Rev. 2.0	Turbidity	5.7		NTU	P402422	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P402926	
		Sulfate	8.8		mg SO4/L	P402927	
	SM 2120 B-2011	Color (true)	190		PCU	P402424	
	SM 2320 B-2011	Total Alkalinity	81		mg CaCO3/L	P402619	
	SM 2540 C-2011	TDS	166		mg/L	P402861	
	SM 2540 D-2011	TSS	10	I	mg/L	P402752	
	SM 4500 F-C-2011	Fluoride	0.16		mg F/L	P402622	
2269255	EPA 350.1 Rev. 2.0	Ammonia-N	0.037		mg N/L	P402572	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.92		mg N/L	P402969	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.37		mg N/L	P402506	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P402560	MS
	SM 5310 B-2011	Organic Carbon	24		mg C/L	P403055	
2269256	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.077		mg P/L	P402401	
2269260	EPA 8321B	2,4-D	0.0083		ug/L	P402616	
		Acesulfame K	0.10	U	ug/L	P402297	
		2,4,5-T	0.0040	U	ug/L	P402616	
		AMPA	0.26	I	ug/L	P402297	
		Acetaminophen	0.0080	U	ug/L	P402616	
		Acetamiprid	0.0020	U	ug/L	P402616	
		Endothall	0.25	U	ug/L	P402297	
		Glufosinate	0.10	U	ug/L	P402297	
		Glyphosate	1.4		ug/L	P402297	
		Afidopyropen	0.0020	U	ug/L	P402616	
		Bentazon	8.0E-04	U	ug/L	P402616	
		Sucralose	0.060		ug/L	P402297	
		Benzovindiflupyr	0.0020	U	ug/L	P402616	
		Carbamazepine	8.0E-04	U	ug/L	P402616	
		Clothianidin	0.0020	U	ug/L	P402616	
		Dinotefuran	0.0020	U	ug/L	P402616	
		Diuron	0.0020	U	ug/L	P402616	
		Fenuron	0.016	U	ug/L	P402616	
		Fluridone	0.0045		ug/L	P402616	
		Imazapyr	0.014	I	ug/L	P402616	
		Hydrocodone	0.0020	U	ug/L	P402616	
		Ibuprofen	0.020	U	ug/L	P402616	
		Imidacloprid	0.0055	I	ug/L	P402616	
		Linuron	0.0040	U	ug/L	P402616	
		Mandestrobin	0.0020	U	ug/L	P402616	
		MCP	0.0020	U	ug/L	P402616	
		Naproxen	0.0080	U	ug/L	P402616	
		Primidone	0.0040	U	ug/L	P402616	
		Pyraclostrobin	0.0020	U	ug/L	P402616	

Field ID: G1NE0934

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2269260	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P402616	
		Tolfenpyrad	0.0020	U	ug/L	P402616	
		Triclopyr	0.0040	U	ug/L	P402616	
2269261	EPA 200.7 Rev. 4.4	Barium	14.6		ug/L	P402557	
		Calcium	34.1		mg/L	P402557	
		Iron	850		ug/L	P402557	
		Magnesium	5.18		mg/L	P402557	
		Manganese	24.0		ug/L	P402557	
		Potassium	1.0	I	mg/L	P402557	
	EPA 200.8 Rev. 5.4	Sodium	7.7		mg/L	P402557	
		Zinc	11	I	ug/L	P402557	
		Aluminum	441		ug/L	P402557	
		Antimony	0.11	I	ug/L	P402557	
		Arsenic	1.53		ug/L	P402557	
		Beryllium	0.033	I	ug/L	P402557	
		Boron**	35.6		ug/L	P402557	
		Cadmium	0.020	U	ug/L	P402557	
		Chromium	1.1	I	ug/L	P402557	
		Copper	1.00		ug/L	P402557	
		Lead	0.77		ug/L	P402557	
		Nickel	0.77	I	ug/L	P402557	
		Selenium	0.20	U	ug/L	P402557	
		Silver	0.010	U	ug/L	P402557	
		Thallium	0.10	U	ug/L	P402557	
		Hardness	106		mg/L	P402557	
	SM 2340B						
2269262	EPA 8270E	Acetochlor	0.27	U	ng/L	P402306	
		Alachlor	0.27	U	ng/L	P402306	
		Ametryn	0.65	U	ng/L	P402306	
		Atrazine	0.64	I	ng/L	P402306	
		Atrazine Desethyl	1.6	U	ng/L	P402306	
		Azinphos Methyl	2.2	U	ng/L	P402306	
		Azoxystrobin**	0.54	U	ng/L	P402306	
		Bromacil	0.54	U	ng/L	P402306	
		Butylate	0.43	U	ng/L	P402306	
		Caffeine**	48		ng/L	P402306	
		Carbophenothion	0.54	U	ng/L	P402306	
		Carfentrazone Ethyl**	0.11	U	ng/L	P402306	
		Chlorpyrifos Ethyl	0.27	U	ng/L	P402306	
		Chlorpyrifos Methyl	0.054	U	ng/L	P402306	
		Cyanazine	3.5	U	ng/L	P402306	
		Demeton	1.6	UJ	ng/L	P402306	CCV
		Diazinon	0.13	U	ng/L	P402306	
		Difenoconazole**	0.65	U	ng/L	P402306	
		Dimethenamid**	0.11	U	ng/L	P402306	
		Disulfoton	0.54	U	ng/L	P402306	

Field ID: G1NE0934

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2269262	EPA 8270E	Dithiopyr**	0.19	U	ng/L	P402306	RPD
		EPTC	1.3	U	ng/L	P402306	
		Ethion	0.16	U	ng/L	P402306	
		Ethoprop	0.11	U	ng/L	P402306	
		Fenamiphos	0.54	U	ng/L	P402306	
		Fenbuconazole**	0.13	U	ng/L	P402306	
		Fipronil	0.32	I	ng/L	P402306	
		Fipronil Desulfinyl**	0.25	I	ng/L	P402306	
		Fipronil Sulfide	2.6		ng/L	P402306	
		Fipronil Sulfone	4.5		ng/L	P402306	
		Fluazifop-P-butyl**	0.11	U	ng/L	P402306	
		Fludioxonil**	0.13	U	ng/L	P402306	
		Flumioxazin**	1.9	U	ng/L	P402306	
		Flutolanil**	0.13	I	ng/L	P402306	
		Fluxapyroxad**	0.11	U	ng/L	P402306	
		Fonofos	0.22	U	ng/L	P402306	
		Hexazinone	0.58	I	ng/L	P402306	
		Imazalil**	0.81	U	ng/L	P402306	
		Iprodione**	0.65	U	ng/L	P402306	
		Malathion	0.38	U	ng/L	P402306	
		Metalaxyl	0.81	U	ng/L	P402306	
		Metolachlor	0.43	I	ng/L	P402306	
		Metribuzin	3.5	U	ng/L	P402306	
		Mevinphos	1.1	U	ng/L	P402306	
		Molinate	0.32	U	ng/L	P402306	
		Myclobutanil**	0.27	U	ng/L	P402306	
		Naled**	1.6	U	ng/L	P402306	
		Norflurazon	2.8		ng/L	P402306	
		Oxadiazon	0.32	U	ng/L	P402306	
		Oxyfluorfen**	0.16	U	ng/L	P402306	
		Parathion Ethyl	0.27	U	ng/L	P402306	
		Parathion Methyl	0.59	U	ng/L	P402306	
		Pendimethalin	1.1	U	ng/L	P402306	
		Phorate	0.57	U	ng/L	P402306	
		Prodiamine**	0.19	U	ng/L	P402306	
		Prometon	0.97	U	ng/L	P402306	
		Prometryn	0.22	U	ng/L	P402306	
		Pronamide**	0.16	U	ng/L	P402306	
		Propiconazole**	0.54	U	ng/L	P402306	
		Pyriproxyfen**	0.13	U	ng/L	P402306	
		Simazine	0.54	U	ng/L	P402306	
		Sulfentrazone**	4.5		ng/L	P402306	
		Tebuconazole**	0.54	U	ng/L	P402306	
		Terbufos	0.11	U	ng/L	P402306	
		Terbutylazine	0.46	U	ng/L	P402306	

Field ID: G1NE0934

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Ref. Method and Comment:

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

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

EPA 8270E: MS accuracy for Atrazine and Caffeine 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: P402422

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P402557

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Manganese	1.0	U	ug/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P402557

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
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	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: P402926

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P402927

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402572

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402969

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P402506

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P402560

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402401

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

Reference Method: EPA 8270E
Batch ID: P402306

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
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	0.50	U	ng/L
Carbophenothion	0.50	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P402306

Component	Result	Code	Units
Cyanazine	3.2	U	ng/L
Cyanazine	3.2	U	ng/L
Demeton	1.5	U	ng/L
Demeton	1.5	U	ng/L
Diazinon	0.12	U	ng/L
Diazinon	0.12	U	ng/L
Difenoconazole	0.60	U	ng/L
Difenoconazole	0.60	U	ng/L
Dimethenamid	0.10	U	ng/L
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.18	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
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
Malathion	0.35	U	ng/L
Malathion	0.35	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P402306

Component	Result	Code	Units
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	3.2	U	ng/L
Metribuzin	3.2	U	ng/L
Mevinphos	1.0	U	ng/L
Mevinphos	1.0	U	ng/L
Molinate	0.30	U	ng/L
Molinate	0.30	U	ng/L
Myclobutanil	0.25	U	ng/L
Myclobutanil	0.25	U	ng/L
Naled	1.5	U	ng/L
Naled	1.5	U	ng/L
Norflurazon	0.50	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxadiazon	0.30	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
Phorate	0.52	U	ng/L
Phorate	0.52	U	ng/L
Prodiamine	0.18	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Prometryn	0.20	U	ng/L
Pronamide	0.15	U	ng/L
Pronamide	0.15	U	ng/L
Propiconazole	0.50	U	ng/L
Propiconazole	0.50	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Simazine	0.50	U	ng/L
Simazine	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L
Terbuthylazine	0.42	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P402297

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: P402616

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	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B-2011

Batch ID: P402424

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011

Batch ID: P402619

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-2011
Batch ID: P402861

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P402752

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P402622

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P403055

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P402557

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	108		P	85 - 115
Calcium	103		P	85 - 115
Iron	108		P	85 - 115
Magnesium	108		P	85 - 115
Manganese	103		P	85 - 115
Potassium	104		P	85 - 115
Sodium	102		P	85 - 115
Zinc	105		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P402557

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	100		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	98.3		P	85 - 115
Beryllium	94.3		P	85 - 115
Boron	102		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	96.1		P	85 - 115
Copper	95.2		P	85 - 115
Lead	102		P	85 - 115
Nickel	98.4		P	85 - 115
Selenium	96.8		P	85 - 115
Silver	104		P	85 - 115
Thallium	103		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P402926

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P402927

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402572

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402969

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P402506

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: P402560

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	109		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P402401

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

Reference Method: EPA 8270E

Batch ID: P402306

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	100	102	P/P	70 - 121
Alachlor	93.0	94.1	P/P	70 - 119
Ametryn	102	102	P/P	61 - 135
Atrazine	95.2	96.2	P/P	76 - 123
Atrazine Desethyl	89.2	93.8	P/P	35 - 140
Azinphos Methyl	131	129	P/P	57 - 163
Azoxystrobin	98.2	106	P/P	43 - 231
Bromacil	87.0	90.0	P/P	42 - 123
Butylate	42.9	44.3	P/P	34 - 92.0
Caffeine	70.3	71.4	P/P	70 - 130
Carbophenothion	105	103	P/P	61 - 121
Carfentrazone Ethyl	117	117	P/P	62 - 139
Chlorpyrifos Ethyl	88.8	87.5	P/P	67 - 121
Chlorpyrifos Methyl	96.3	93.9	P/P	67 - 120
Cyanazine	135	141	P/P	20 - 226
Demeton	48.5	46.2	P/P	35 - 125
Diazinon	97.6	95.9	P/P	70 - 122
Difenoconazole	183	184	P/P	56 - 186
Dimethenamid	79.7	80.8	P/P	67 - 119
Disulfoton	91.1	94.0	P/P	47 - 120
Dithiopyr	90.6	94.2	P/P	67 - 118
EPTC	44.9	45.4	P/P	33 - 90.0
Ethion	76.9	74.7	P/P	40 - 133
Ethoprop	87.4	87.0	P/P	61 - 121
Fenamiphos	94.1	97.9	P/P	31 - 139
Fenbuconazole	115	119	P/P	66 - 141
Fipronil	106	107	P/P	62 - 129
Fipronil Desulfinyl	106	117	P/P	59 - 126
Fipronil Sulfide	87.8	90.6	P/P	63 - 117
Fipronil Sulfone	81.2	78.3	P/P	57 - 117
Fluazifop-P-butyl	105	104	P/P	63 - 124
Fludioxonil	121	121	P/P	63 - 123
Flumioxazin	189	191	P/P	34 - 245
Flutolanil	93.1	91.4	P/P	56 - 131

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P402306

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluxapyroxad	94.1	95.2	P/P	57 - 117
Fonofos	86.6	84.8	P/P	61 - 116
Hexazinone	96.1	100	P/P	55 - 138
Imazalil	93.7	96.7	P/P	33 - 143
Iprodione	109	102	P/P	59 - 118
Malathion	93.3	91.0	P/P	62 - 138
Metalaxyl	92.8	95.7	P/P	24 - 147
Metolachlor	89.6	90.4	P/P	68 - 118
Metribuzin	90.6	92.6	P/P	20 - 239
Mevinphos	75.7	84.4	P/P	46 - 124
Molinate	46.8	50.0	P/P	46 - 100
Myclobutanil	92.2	95.7	P/P	32 - 149
Naled	47.7	46.8	P/P	32 - 95.0
Norflurazon	110	112	P/P	57 - 127
Oxadiazon	82.0	83.9	P/P	63 - 118
Oxyfluorfen	102	97.1	P/P	69 - 137
Parathion Ethyl	87.9	93.1	P/P	70 - 113
Parathion Methyl	112	110	P/P	71 - 130
Pendimethalin	65.2	66.7	P/P	55 - 118
Phorate	74.0	67.8	P/P	46 - 125
Prodiamine	28.8	25.6	P/P	20 - 141
Prometon	87.6	91.4	P/P	54 - 122
Prometryn	95.4	95.7	P/P	66 - 124
Pronamide	93.4	91.5	P/P	79 - 122
Propiconazole	94.6	97.8	P/P	61 - 126
Pyriproxyfen	89.2	91.8	P/P	52 - 131
Simazine	98.1	103	P/P	75 - 128
Sulfentrazone	100	97.6	P/P	20 - 132
Tebuconazole	77.6	76.9	P/P	20 - 116
Terbufos	93.7	95.4	P/P	61 - 117
Terbutylazine	83.0	89.0	P/P	74 - 116

Reference Method: EPA 8321B
Batch ID: P402297

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	106		P	40 - 150
AMPA	88.6		P	40 - 150
Endothall	87.2		P	40 - 150
Glufosinate	92.7		P	40 - 150
Glyphosate	98.0		P	40 - 150
Sucralose	99.0		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P402616

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	137		P	30 - 160
2,4,5-T	125		P	30 - 160
Acetaminophen	91.5		P	30 - 160
Acetamiprid	92.4		P	30 - 160
Afidopyropen	70.4		P	30 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P402616

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bentazon	107		P	30 - 160
Benzovindiflupyr	97.0		P	30 - 160
Carbamazepine	86.8		P	30 - 160
Clothianidin	97.8		P	30 - 160
Dinotefuran	93.3		P	30 - 160
Diuron	69.7		P	30 - 160
Fenuron	94.4		P	30 - 160
Fluridone	90.4		P	30 - 160
Hydrocodone	100		P	30 - 160
Ibuprofen	91.9		P	30 - 160
Imazapyr	99.5		P	30 - 160
Imidacloprid	98.3		P	30 - 160
Linuron	70.7		P	30 - 160
Mandestrobin	95.2		P	30 - 160
MCPP	126		P	30 - 160
Naproxen	61.8		P	30 - 160
Primidone	105		P	30 - 160
Pyraclostrobin	84.3		P	30 - 160
Thiamethoxam	107		P	30 - 160
Tolfenpyrad	58.3		P	30 - 160
Triclopyr	129		P	30 - 160

Reference Method: SM 2120 B-2011
Batch ID: P402424

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.6		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P402619

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P402622

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P403055

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P402557

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2268535	Barium	105	107	P/P	80 - 120
2268535	Calcium	101		P	80 - 120
2268535	Iron	107	107	P/P	80 - 120
2268535	Magnesium	106	107	P/P	80 - 120
2268535	Manganese	102	103	P/P	80 - 120
2268535	Potassium	103	104	P/P	80 - 120
2268535	Sodium	99.9		P	80 - 120
2268535	Zinc	105	106	P/P	80 - 120
2269248	Barium	105		P	80 - 120
2269248	Calcium	101		P	80 - 120
2269248	Iron	108		P	80 - 120
2269248	Magnesium	101		P	80 - 120
2269248	Manganese	101		P	80 - 120
2269248	Potassium	101		P	80 - 120
2269248	Sodium	103		P	80 - 120
2269248	Zinc	101		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P402557

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2268535	Aluminum	101	101	P/P	80 - 120
2268535	Antimony	104	105	P/P	80 - 120
2268535	Arsenic	98.5	98.3	P/P	80 - 120
2268535	Beryllium	95.9	98.5	P/P	80 - 120
2268535	Boron	102	103	P/P	80 - 120
2268535	Cadmium	100	103	P/P	80 - 120
2268535	Chromium	103	102	P/P	80 - 120
2268535	Copper	95.5	96.0	P/P	80 - 120
2268535	Lead	102	103	P/P	80 - 120
2268535	Nickel	96.2	95.9	P/P	80 - 120
2268535	Selenium	97.9	99.2	P/P	80 - 120
2268535	Silver	101	102	P/P	80 - 120
2268535	Thallium	105	106	P/P	80 - 120
2269248	Aluminum	98.1		P	80 - 120
2269248	Antimony	103		P	80 - 120
2269248	Arsenic	99.3		P	80 - 120
2269248	Beryllium	96.5		P	80 - 120
2269248	Boron	104		P	80 - 120
2269248	Cadmium	102		P	80 - 120
2269248	Chromium	97.5		P	80 - 120
2269248	Copper	94.9		P	80 - 120
2269248	Lead	104		P	80 - 120
2269248	Nickel	97.3		P	80 - 120
2269248	Selenium	97.3		P	80 - 120
2269248	Silver	102		P	80 - 120
2269248	Thallium	107		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P402926

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P402926

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2269094	Chloride	98.3		P	90 - 110
2269240	Chloride	98.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P402927

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2269094	Sulfate	101		P	90 - 110
2269240	Sulfate	96.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402572

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2269294	Ammonia-N	99.8	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402969

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2269255	Kjeldahl Nitrogen	102	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P402506

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2269209	NO2NO3-N	97.8		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P402560

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2269284	Total-P	111	112	F/F	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402401

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2269242	O-Phosphate-P	95.5	95.3	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P402306

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2268339	Acetochlor	92.2	102	P/P	66 - 122
2268339	Alachlor	83.8	96.5	P/P	65 - 122
2268339	Ametryn	75.4	87.2	P/P	45 - 173
2268339	Atrazine Desethyl	54.8	64.8	P/P	25 - 150
2268339	Azinphos Methyl	120	142	P/P	44 - 174
2268339	Azoxystrobin	108	98.8	P/P	10 - 268
2268339	Bromacil	84.2	95.7	P/P	31 - 145
2268339	Butylate	45.5	38.6	P/P	15 - 97.0

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P402306

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2268339	Carbophenothion	91.0	101	P/P	42 - 129
2268339	Carfentrazone Ethyl	106	89.0	P/P	62 - 145
2268339	Chlorpyrifos Ethyl	74.7	82.5	P/P	60 - 124
2268339	Chlorpyrifos Methyl	90.1	101	P/P	66 - 119
2268339	Cyanazine	138	162	P/P	17 - 225
2268339	Demeton	113	115	P/P	36 - 142
2268339	Diazinon	96.4	115	P/P	70 - 128
2268339	Difenoconazole	177	215	P/P	33 - 222
2268339	Dimethenamid	69.9	83.0	P/P	54 - 125
2268339	Disulfoton	89.8	99.4	P/P	49 - 133
2268339	Dithiopyr	78.7	83.8	P/P	55 - 123
2268339	EPTC	47.7	36.9	P/P	19 - 91.0
2268339	Ethion	57.3	82.5	P/P	13 - 143
2268339	Ethoprop	110	113	P/P	49 - 144
2268339	Fenamiphos	87.5	76.4	P/P	32 - 136
2268339	Fenbuconazole	121	128	P/P	73 - 148
2268339	Fipronil	104	111	P/P	57 - 129
2268339	Fipronil Desulfinyl	97.4	116	P/P	49 - 127
2268339	Fipronil Sulfide	89.5	101	P/P	44 - 127
2268339	Fipronil Sulfone	71.6	87.0	P/P	35 - 126
2268339	Fluazifop-P-butyl	96.7	114	P/P	67 - 129
2268339	Fludioxonil	104	125	P/P	61 - 126
2268339	Flumioxazin	182	235	P/P	38 - 279
2268339	Flutolanil	74.7	93.1	P/P	55 - 136
2268339	Fluxapyroxad	80.6	95.4	P/P	33 - 140
2268339	Fonofos	91.3	105	P/P	58 - 125
2268339	Hexazinone	92.0	106	P/P	57 - 148
2268339	Imazalil	77.7	84.3	P/P	10 - 221
2268339	Iprodione	110	123	P/P	32 - 140
2268339	Malathion	88.2	99.8	P/P	52 - 138
2268339	Metalaxyl	84.0	96.8	P/P	46 - 134
2268339	Metolachlor	82.4	96.5	P/P	58 - 122
2268339	Metribuzin	102	105	P/P	16 - 272
2268339	Mevinphos	105	111	P/P	45 - 140
2268339	Molinate	57.7	56.2	P/P	41 - 103
2268339	Myclobutanil	82.5	98.4	P/P	60 - 134
2268339	Naled	49.1	53.8	P/P	20 - 113
2268339	Norflurazon	97.7	112	P/P	51 - 123
2268339	Oxadiazon	76.2	85.7	P/P	44 - 125
2268339	Oxyfluorfen	104	123	P/P	66 - 176
2268339	Parathion Ethyl	90.9	105	P/P	57 - 132
2268339	Parathion Methyl	117	125	P/P	59 - 156
2268339	Pendimethalin	81.9	87.8	P/P	59 - 129
2268339	Phorate	87.3	84.8	P/P	47 - 136
2268339	Prodiamine	47.3	52.3	P/P	10 - 159
2268339	Prometon	82.8	108	P/P	59 - 127
2268339	Prometryn	67.9	72.5	P/P	59 - 129
2268339	Pronamide	81.9	95.0	P/P	65 - 145
2268339	Propiconazole	82.7	86.5	P/P	28 - 165
2268339	Pyriproxyfen	69.7	83.7	P/P	21 - 180
2268339	Simazine	101	110	P/P	63 - 147
2268339	Sulfentrazone	85.0	102	P/P	32 - 136

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P402306

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2268339	Tebuconazole	50.0	73.7	P/P	10 - 117
2268339	Terbufos	109	119	P/P	61 - 131
2268339	Terbuthylazine	87.1	99.2	P/P	62 - 126

Reference Method: EPA 8321B
Batch ID: P402297

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2268337	Acesulfame K	123	133	P/P	40 - 150
2268337	AMPA	76.0	77.6	P/P	40 - 150
2268337	Endothall	105	106	P/P	40 - 150
2268337	Glufosinate	80.0	77.7	P/P	40 - 150
2268337	Glyphosate	82.0	77.0	P/P	40 - 150
2268337	Sucralose	102	102	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P402616

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2269820	2,4,5-T	92.5	86.2	P/P	30 - 160
2269820	Acetaminophen	93.9	95.3	P/P	30 - 160
2269820	Acetamiprid	45.4	35.7	P/P	30 - 160
2269820	Afidopyropen	64.2	51.9	P/P	30 - 160
2269820	Benzovindiflupyr	82.1	76.6	P/P	30 - 160
2269820	Carbamazepine	46.0	44.6	P/P	30 - 160
2269820	Clothianidin	55.3	58.4	P/P	30 - 160
2269820	Dinotefuran	67.6	71.4	P/P	30 - 160
2269820	Diuron	30.9	30.1	P/P	30 - 160
2269820	Fenuron	32.6	33.7	P/P	30 - 160
2269820	Fluridone	67.1	67.9	P/P	30 - 160
2269820	Hydrocodone	56.1	60.2	P/P	30 - 160
2269820	Ibuprofen	69.1	59.6	P/P	30 - 160
2269820	Imidacloprid	91.5	86.2	P/P	30 - 160
2269820	Linuron	52.7	52.0	P/P	30 - 160
2269820	Mandestrobin	80.6	81.1	P/P	30 - 160
2269820	MCPP	81.2	81.8	P/P	30 - 160
2269820	Naproxen	76.4	63.5	P/P	30 - 160
2269820	Primidone	58.5	62.6	P/P	30 - 160
2269820	Pyraclostrobin	71.6	75.1	P/P	30 - 160
2269820	Thiamethoxam	70.9	73.0	P/P	30 - 160
2269820	Tolfenpyrad	50.5	51.9	P/P	30 - 160
2269820	Triclopyr	94.3	92.6	P/P	30 - 160

Reference Method: SM 4500 F-C-2011
Batch ID: P402622

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2269232	Fluoride	100	102	P/P	92 - 107

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P403055

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2269122	Organic Carbon	95.0	96.3	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P402422

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269240	Turbidity	2.26	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P402557

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2268535	Barium	1.72	Spike	P	0 - 20
2268535	Calcium	1.62	Spike	P	0 - 20
2268535	Iron	0.256	Spike	P	0 - 20
2268535	Magnesium	0.129	Spike	P	0 - 20
2268535	Manganese	1.58	Spike	P	0 - 20
2268535	Potassium	0.621	Spike	P	0 - 20
2268535	Sodium	1.48	Spike	P	0 - 20
2268535	Zinc	0.377	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P402557

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2268535	Aluminum	0.231	Spike	P	0 - 20
2268535	Antimony	0.821	Spike	P	0 - 20
2268535	Arsenic	0.192	Spike	P	0 - 20
2268535	Beryllium	2.69	Spike	P	0 - 20
2268535	Boron	0.467	Spike	P	0 - 20
2268535	Cadmium	2.14	Spike	P	0 - 20
2268535	Chromium	0.259	Spike	P	0 - 20
2268535	Copper	0.432	Spike	P	0 - 20
2268535	Lead	0.443	Spike	P	0 - 20
2268535	Nickel	0.300	Spike	P	0 - 20
2268535	Selenium	1.34	Spike	P	0 - 20
2268535	Silver	1.16	Spike	P	0 - 20
2268535	Thallium	1.34	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P402926

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269240	Chloride	0.198	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P402927

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269240	Sulfate	0.446	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P402572

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269294	Ammonia-N	1.59	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P402969

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269255	Kjeldahl Nitrogen	1.78	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P402506

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269209	NO2NO3-N	0.199	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P402560

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269284	Total-P	1.15	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P402401

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269242	O-Phosphate-P	0.210	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P402306

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2268339	Acetochlor	9.98	Spike	P	0 - 30
2268339	Alachlor	14.0	Spike	P	0 - 30
2268339	Ametryn	10.6	Spike	P	0 - 30
2268339	Atrazine	7.25	Spike	P	0 - 30
2268339	Atrazine Desethyl	16.8	Spike	P	0 - 30
2268339	Azinphos Methyl	16.8	Spike	P	0 - 30
2268339	Azoxystrobin	7.70	Spike	P	0 - 30
2268339	Bromacil	11.9	Spike	P	0 - 30
2268339	Butylate	16.2	Spike	P	0 - 30
2268339	Caffeine	0.0433	Spike	P	0 - 30
2268339	Carbophenothion	10.3	Spike	P	0 - 30
2268339	Carfentrazone Ethyl	17.9	Spike	P	0 - 30
2268339	Chlorpyrifos Ethyl	9.91	Spike	P	0 - 30
2268339	Chlorpyrifos Methyl	11.6	Spike	P	0 - 30
2268339	Cyanazine	15.5	Spike	P	0 - 30
2268339	Demeton	2.03	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P402306

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2268339	Diazinon	17.7	Spike	P	0 - 30
2268339	Difenoconazole	19.7	Spike	P	0 - 30
2268339	Dimethenamid	17.2	Spike	P	0 - 30
2268339	Disulfoton	10.1	Spike	P	0 - 30
2268339	Dithiopyr	6.34	Spike	P	0 - 30
2268339	EPTC	25.6	Spike	P	0 - 30
2268339	Ethion	36.1	Spike	F	0 - 30
2268339	Ethoprop	3.09	Spike	P	0 - 30
2268339	Fenamiphos	13.5	Spike	P	0 - 30
2268339	Fenbuconazole	6.22	Spike	P	0 - 30
2268339	Fipronil	6.86	Spike	P	0 - 30
2268339	Fipronil Desulfinyl	16.2	Spike	P	0 - 30
2268339	Fipronil Sulfide	10.2	Spike	P	0 - 30
2268339	Fipronil Sulfone	14.8	Spike	P	0 - 30
2268339	Fluazifop-P-butyl	16.7	Spike	P	0 - 30
2268339	Fludioxonil	18.5	Spike	P	0 - 30
2268339	Flumioxazin	25.0	Spike	P	0 - 30
2268339	Flutolanil	21.9	Spike	P	0 - 30
2268339	Fluxapyroxad	16.8	Spike	P	0 - 30
2268339	Fonofos	13.7	Spike	P	0 - 30
2268339	Hexazinone	8.66	Spike	P	0 - 30
2268339	Imazalil	6.59	Spike	P	0 - 30
2268339	Iprodione	11.7	Spike	P	0 - 30
2268339	Malathion	12.4	Spike	P	0 - 30
2268339	Metalaxyl	14.1	Spike	P	0 - 30
2268339	Metolachlor	14.4	Spike	P	0 - 30
2268339	Metribuzin	3.35	Spike	P	0 - 30
2268339	Mevinphos	5.06	Spike	P	0 - 30
2268339	Molinate	2.53	Spike	P	0 - 30
2268339	Myclobutanil	15.9	Spike	P	0 - 30
2268339	Naled	9.03	Spike	P	0 - 30
2268339	Norflurazon	13.3	Spike	P	0 - 30
2268339	Oxadiazon	11.7	Spike	P	0 - 30
2268339	Oxyfluorfen	16.4	Spike	P	0 - 30
2268339	Parathion Ethyl	14.4	Spike	P	0 - 30
2268339	Parathion Methyl	6.41	Spike	P	0 - 30
2268339	Pendimethalin	6.97	Spike	P	0 - 30
2268339	Phorate	2.96	Spike	P	0 - 30
2268339	Prodiamine	10.1	Spike	P	0 - 30
2268339	Prometon	26.5	Spike	P	0 - 30
2268339	Prometryn	6.51	Spike	P	0 - 30
2268339	Pronamide	14.9	Spike	P	0 - 30
2268339	Propiconazole	2.96	Spike	P	0 - 30
2268339	Pyriproxyfen	18.2	Spike	P	0 - 30
2268339	Simazine	9.23	Spike	P	0 - 30
2268339	Sulfentrazone	14.0	Spike	P	0 - 30
2268339	Tebuconazole	28.7	Spike	P	0 - 30
2268339	Terbufos	8.60	Spike	P	0 - 30
2268339	Terbuthylazine	13.0	Spike	P	0 - 30
LFB	Acetochlor	1.12	LCS	P	0 - 30
LFB	Alachlor	1.19	LCS	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P402306

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Ametryn	0.471	LCS	P	0 - 30
LFB	Atrazine	1.03	LCS	P	0 - 30
LFB	Atrazine Desethyl	4.98	LCS	P	0 - 30
LFB	Azinphos Methyl	1.84	LCS	P	0 - 30
LFB	Azoxystrobin	7.60	LCS	P	0 - 30
LFB	Bromacil	3.45	LCS	P	0 - 30
LFB	Butylate	3.22	LCS	P	0 - 30
LFB	Caffeine	1.57	LCS	P	0 - 30
LFB	Carbophenothion	1.86	LCS	P	0 - 30
LFB	Carfentrazone Ethyl	0.223	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	1.54	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	2.43	LCS	P	0 - 30
LFB	Cyanazine	4.14	LCS	P	0 - 30
LFB	Demeton	4.83	LCS	P	0 - 30
LFB	Diazinon	1.84	LCS	P	0 - 30
LFB	Difenoconazole	0.655	LCS	P	0 - 30
LFB	Dimethenamid	1.46	LCS	P	0 - 30
LFB	Disulfoton	3.09	LCS	P	0 - 30
LFB	Dithiopyr	3.92	LCS	P	0 - 30
LFB	EPTC	0.967	LCS	P	0 - 30
LFB	Ethion	2.82	LCS	P	0 - 30
LFB	Ethoprop	0.466	LCS	P	0 - 30
LFB	Fenamiphos	3.96	LCS	P	0 - 30
LFB	Fenbuconazole	3.17	LCS	P	0 - 30
LFB	Fipronil	0.397	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	9.79	LCS	P	0 - 30
LFB	Fipronil Sulfide	3.10	LCS	P	0 - 30
LFB	Fipronil Sulfone	3.59	LCS	P	0 - 30
LFB	Fluazifop-P-butyl	1.44	LCS	P	0 - 30
LFB	Fludioxonil	0.268	LCS	P	0 - 30
LFB	Flumioxazin	0.990	LCS	P	0 - 30
LFB	Flutolanil	1.88	LCS	P	0 - 30
LFB	Fluxapyroxad	1.08	LCS	P	0 - 30
LFB	Fonofos	2.12	LCS	P	0 - 30
LFB	Hexazinone	4.10	LCS	P	0 - 30
LFB	Imazalil	3.09	LCS	P	0 - 30
LFB	Iprodione	6.70	LCS	P	0 - 30
LFB	Malathion	2.52	LCS	P	0 - 30
LFB	Metalaxyl	3.05	LCS	P	0 - 30
LFB	Metolachlor	0.882	LCS	P	0 - 30
LFB	Metribuzin	2.20	LCS	P	0 - 30
LFB	Mevinphos	10.8	LCS	P	0 - 30
LFB	Molinate	6.59	LCS	P	0 - 30
LFB	Myclobutanil	3.69	LCS	P	0 - 30
LFB	Naled	1.89	LCS	P	0 - 30
LFB	Norflurazon	1.47	LCS	P	0 - 30
LFB	Oxadiazon	2.36	LCS	P	0 - 30
LFB	Oxyfluorfen	4.78	LCS	P	0 - 30
LFB	Parathion Ethyl	5.83	LCS	P	0 - 30
LFB	Parathion Methyl	2.11	LCS	P	0 - 30
LFB	Pendimethalin	2.38	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P402306

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Phorate	8.68	LCS	P	0 - 30
LFB	Prodiamine	11.9	LCS	P	0 - 30
LFB	Prometon	4.21	LCS	P	0 - 30
LFB	Prometryn	0.268	LCS	P	0 - 30
LFB	Pronamide	2.08	LCS	P	0 - 30
LFB	Propiconazole	3.33	LCS	P	0 - 30
LFB	Pyriproxyfen	2.91	LCS	P	0 - 30
LFB	Simazine	4.94	LCS	P	0 - 30
LFB	Sulfentrazone	2.89	LCS	P	0 - 30
LFB	Tebuconazole	0.883	LCS	P	0 - 30
LFB	Terbufos	1.84	LCS	P	0 - 30
LFB	Terbuthylazine	7.07	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P402297

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2268337	Acesulfame K	7.71	Spike	P	0 - 30
2268337	AMPA	1.94	Spike	P	0 - 30
2268337	Endothall	1.56	Spike	P	0 - 30
2268337	Glufosinate	2.85	Spike	P	0 - 30
2268337	Glyphosate	5.95	Spike	P	0 - 30
2268337	Sucralose	0.147	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P402616

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269820	2,4-D	0.694	Spike	P	0 - 30
2269820	2,4,5-T	7.06	Spike	P	0 - 30
2269820	Acetaminophen	1.51	Spike	P	0 - 30
2269820	Acetamiprid	23.8	Spike	P	0 - 30
2269820	Afidopyropen	21.2	Spike	P	0 - 30
2269820	Bentazon	5.64	Spike	P	0 - 30
2269820	Benzovindiflupyr	6.94	Spike	P	0 - 30
2269820	Carbamazepine	3.01	Spike	P	0 - 30
2269820	Clothianidin	5.62	Spike	P	0 - 30
2269820	Dinotefuran	5.36	Spike	P	0 - 30
2269820	Diuron	2.66	Spike	P	0 - 30
2269820	Fenuron	3.31	Spike	P	0 - 30
2269820	Fluridone	1.27	Spike	P	0 - 30
2269820	Hydrocodone	7.00	Spike	P	0 - 30
2269820	Ibuprofen	14.7	Spike	P	0 - 30
2269820	Imazapyr	0.332	Spike	P	0 - 30
2269820	Imidacloprid	5.67	Spike	P	0 - 30
2269820	Linuron	1.35	Spike	P	0 - 30
2269820	Mandestrobin	0.654	Spike	P	0 - 30
2269820	MCP	0.741	Spike	P	0 - 30
2269820	Naproxen	18.5	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B

Batch ID: P402616

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269820	Primidone	6.75	Spike	P	0 - 30
2269820	Pyraclostrobin	4.76	Spike	P	0 - 30
2269820	Thiamethoxam	2.97	Spike	P	0 - 30
2269820	Tolfenpyrad	2.67	Spike	P	0 - 30
2269820	Triclopyr	1.82	Spike	P	0 - 30

Reference Method: SM 2120 B-2011

Batch ID: P402424

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269121	Color (true)	1.82	Sample	P	0 - 20

Reference Method: SM 2320 B-2011

Batch ID: P402619

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269232	Total Alkalinity	2.34	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011

Batch ID: P402861

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269208	TDS	2.33	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011

Batch ID: P402622

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269232	Fluoride	0.946	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011

Batch ID: P403055

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269122	Organic Carbon	0.819	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2269260
Field Sample ID: G1NE0934

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	95.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	116	P	30 - 160
EPA 8321B	Carbamazepine-d10	55.9	P	30 - 160
EPA 8321B	Diuron-d6	43.4	P	30 - 160
EPA 8321B	Endothall-d6	97.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	75.7	P	30 - 160
EPA 8321B	Ibuprofen-d3	72.7	P	30 - 160
EPA 8321B	Primidone-d5	83.8	P	30 - 160
EPA 8321B	Sucralose-d6	107	P	30 - 160

Lab Sample ID: 2269262
Field Sample ID: G1NE0934

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	86.9	P	20 - 200
EPA 8270E	Simazine-d10	128	P	73 - 135
EPA 8270E	Terbufos-d10	118	P	58 - 130

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A107220

Included Lab Sample IDs: 2269256

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.3	98.3	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A107230

Included Lab Sample IDs: 2269254

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	102	P/P	95 - 105

Reference Method: SM 2120 B-2011

Run ID: A107231

Included Lab Sample IDs: 2269254

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	90 - 115

Reference Method: EPA 8321B

Run ID: A107239

Included Lab Sample IDs: 2269260

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	87.5	86.8	P/P	60 - 160
Glufosinate	91.9	93.6	P/P	60 - 160
Glyphosate	104	104	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A107242

Included Lab Sample IDs: 2269260

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	129	79.0	P/P	60 - 160
Endothall	83.5	77.6	P/P	60 - 160
Sucralose	96.9	98.8	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A107268

Included Lab Sample IDs: 2269255

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A107292

Included Lab Sample IDs: 2269255

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	99.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-2011

Run ID: A107310

Included Lab Sample IDs: 2269254

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.4	102	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A107310

Included Lab Sample IDs: 2269254

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A107347

Included Lab Sample IDs: 2269261

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.7	97.8	P/P	90 - 110
Antimony	99.2	98.3	P/P	90 - 110
Arsenic	95.2	95.4	P/P	90 - 110
Beryllium	92.0	92.3	P/P	90 - 110
Boron	102	103	P/P	90 - 110
Cadmium	98.8	98.9	P/P	90 - 110
Chromium	97.1	94.6	P/P	90 - 110
Copper	93.1	91.0	P/P	90 - 110
Lead	96.8	96.4	P/P	90 - 110
Nickel	93.4	93.3	P/P	90 - 110
Selenium	96.9	97.1	P/P	90 - 110
Silver	95.7	95.7	P/P	90 - 110
Thallium	99.3	97.5	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A107387

Included Lab Sample IDs: 2269262

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	103		P	80 - 120
Alachlor	101		P	80 - 120
Ametryn	94.5		P	80 - 120
Atrazine	104		P	80 - 120
Atrazine Desethyl	105		P	80 - 120
Azinphos Methyl	87.2		P	80 - 120
Azoxystrobin	92.5		P	80 - 120
Bromacil	100		P	80 - 120
Butylate	99.9		P	80 - 120
Caffeine	96.0		P	80 - 120
Carbophenothion	100		P	80 - 120
Carfentrazone Ethyl	101		P	80 - 120
Chlorpyrifos Ethyl	103		P	80 - 120
Chlorpyrifos Methyl	108		P	80 - 120
Cyanazine	102		P	80 - 120
Demeton	49.6*		F	80 - 120
Diazinon	103		P	80 - 120
Difenoconazole	89.5		P	80 - 120

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8270E
 Run ID: A107387
 Included Lab Sample IDs: 2269262

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Dimethenamid	103		P	80 - 120
Disulfoton	98.2		P	80 - 120
Dithiopyr	103		P	80 - 120
EPTC	100		P	80 - 120
Ethion	97.1		P	80 - 120
Ethoprop	99.6		P	80 - 120
Fenamiphos	95.7		P	80 - 120
Fenbuconazole	93.0		P	80 - 120
Fipronil	101		P	80 - 120
Fipronil Desulfinyl	110		P	80 - 120
Fipronil Sulfide	103		P	80 - 120
Fipronil Sulfone	106		P	80 - 120
Fluazifop-P-butyl	113		P	80 - 120
Fludioxonil	101		P	80 - 120
Flumioxazin	92.9		P	80 - 120
Flutolanil	102		P	80 - 120
Fluxapyroxad	102		P	80 - 120
Fonofos	100		P	80 - 120
Hexazinone	110		P	80 - 120
Imazalil	92.6		P	80 - 120
Iprodione	107		P	80 - 120
Malathion	95.0		P	80 - 120
Metalaxyl	106		P	80 - 120
Metolachlor	105		P	80 - 120
Metribuzin	102		P	80 - 120
Mevinphos	101		P	80 - 120
Molinate	91.1		P	80 - 120
Myclobutanil	97.8		P	80 - 120
Naled	103		P	80 - 120
Norflurazon	90.2		P	80 - 120
Oxadiazon	104		P	80 - 120
Oxyfluorfen	92.3		P	80 - 120
Parathion Ethyl	98.6		P	80 - 120
Parathion Methyl	100		P	80 - 120
Pendimethalin	98.2		P	80 - 120
Phorate	100		P	80 - 120
Prodiamine	103		P	80 - 120
Prometon	99.4		P	80 - 120
Prometryn	98.6		P	80 - 120
Pronamide	94.5		P	80 - 120
Propiconazole	101		P	80 - 120
Pyriproxyfen	100		P	80 - 120
Simazine	108		P	80 - 120
Sulfentrazone	104		P	80 - 120
Tebuconazole	101		P	80 - 120
Terbufos	103		P	80 - 120
Terbuthylazine	103		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A107416

Included Lab Sample IDs: 2269261

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	105	101	P/P	90 - 110
Calcium	96.6	101	P/P	90 - 110
Iron	98.0	102	P/P	90 - 110
Magnesium	96.8	101	P/P	90 - 110
Manganese	103	98.5	P/P	90 - 110
Potassium	99.6	103	P/P	90 - 110
Sodium	98.9	102	P/P	90 - 110
Zinc	103	97.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A107424

Included Lab Sample IDs: 2269255

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	103	107	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A107449

Included Lab Sample IDs: 2269254

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

Reference Method: EPA 8321B

Run ID: A107453

Included Lab Sample IDs: 2269260

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	126	121	P/P	50 - 150
2,4,5-T	111	103	P/P	50 - 150
Acetaminophen	115	109	P/P	60 - 160
Acetamiprid	114	102	P/P	50 - 150
Afidopyropen	105	103	P/P	50 - 150
Bentazon	93.9	130	P/P	50 - 160
Benzovindiflupyr	120	120	P/P	50 - 160
Carbamazepine	119	107	P/P	60 - 150
Clothianidin	126	113	P/P	60 - 150
Dinotefuran	106	100	P/P	50 - 150
Diuron	108	115	P/P	60 - 160
Fenuron	106	107	P/P	60 - 150
Fluridone	111	112	P/P	60 - 160
Hydrocodone	116	103	P/P	60 - 150
Ibuprofen	82.9	101	P/P	50 - 160
Imazapyr	126	100	P/P	50 - 160
Imidacloprid	108	105	P/P	60 - 150
Linuron	109	109	P/P	60 - 150
Mandestrobin	117	115	P/P	50 - 150
MCPP	113	109	P/P	50 - 150
Naproxen	70.0	97.6	P/P	50 - 160
Primidone	94.8	109	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A107453
Included Lab Sample IDs: 2269260

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	105	105	P/P	60 - 150
Thiamethoxam	118	106	P/P	50 - 150
Tolfenpyrad	98.9	109	P/P	60 - 150
Triclopyr	115	118	P/P	50 - 150

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A107494
Included Lab Sample IDs: 2269255

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	106	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A107501
Included Lab Sample IDs: 2269255

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.0	96.9	P/P	90 - 110

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							2.26	
EPA 200.7 Rev. 4.4	Barium	108		105	107	105			1.72
	Calcium	103		101	101				1.62
	Iron	108		107	107	108			0.256
	Magnesium	108		106	107	101			0.129
	Manganese	103		102	103	101			1.58
	Potassium	104		103	104	101			0.621
	Sodium	102		99.9	103				1.48
	Zinc	105		105	106	101			0.377
EPA 200.8 Rev. 5.4	Aluminum	100		98.1	101	101			0.231
	Antimony	102		103	104	105			0.821
	Arsenic	98.3		99.3	98.5	98.3			0.192
	Beryllium	94.3		96.5	95.9	98.5			2.69
	Boron	102		104	102	103			0.467
	Cadmium	102		102	100	103			2.14
	Chromium	96.1		97.5	103	102			0.259
	Copper	95.2		94.9	95.5	96.0			0.432
	Lead	102		104	102	103			0.443
	Nickel	98.4		97.3	96.2	95.9			0.300
	Selenium	96.8		97.3	97.9	99.2			1.34
	Silver	104		102	101	102			1.16
	Thallium	103		107	105	106			1.34
EPA 300.0 Rev. 2.1	Chloride	101		98.8	98.3			0.198	
	Sulfate	102		96.1	101			0.446	
EPA 350.1 Rev. 2.0	Ammonia-N	102		99.8	101				1.59
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104		102	106				1.78
EPA 353.2 Rev. 2.0	NO2NO3-N	104		97.8					0.199
EPA 365.1 Rev. 2.0	Total-P	109		111	112				1.15
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.7		95.5	95.3				0.210
EPA 8270E	Acetochlor	100	102	92.2	102		1.12		9.98
	Alachlor	93.0	94.1	83.8	96.5		1.19		14.0
	Ametryn	102	102	75.4	87.2		0.471		10.6
	Atrazine	95.2	96.2				1.03		7.25
	Atrazine Desethyl	89.2	93.8	54.8	64.8		4.98		16.8
	Azinphos Methyl	131	129	120	142		1.84		16.8
	Azoxystrobin	98.2	106	108	98.8		7.60		7.70
	Bromacil	87.0	90.0	84.2	95.7		3.45		11.9
	Butylate	42.9	44.3	45.5	38.6		3.22		16.2
	Caffeine	70.3	71.4				1.57		0.0433
	Carbophenothion	105	103	91.0	101		1.86		10.3
	Carfentrazone Ethyl	117	117	106	89.0		0.223		17.9
	Chlorpyrifos Ethyl	88.8	87.5	82.5	74.7		1.54		9.91
	Chlorpyrifos Methyl	96.3	93.9	90.1	101		2.43		11.6
	Cyanazine	135	141	138	162		4.14		15.5
	Demeton	48.5	46.2	113	115		4.83		2.03
	Diazinon	97.6	95.9	96.4	115		1.84		17.7
	Difenoconazole	183	184	177	215		0.655		19.7
	Dimethenamid	79.7	80.8	69.9	83.0		1.46		17.2
	Disulfoton	91.1	94.0	89.8	99.4		3.09		10.1
	Dithiopyr	90.6	94.2	78.7	83.8		3.92		6.34
	EPTC	44.9	45.4	47.7	36.9		0.967		25.6
	Ethion	76.9	74.7	57.3	82.5		2.82		36.1
	Ethoprop	87.4	87.0	110	113		0.466		3.09
	Fenamiphos	94.1	97.9	87.5	76.4		3.96		13.5

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Fenbuconazole	115	119	121	128	3.17	6.22
	Fipronil	106	107	104	111	0.397	6.86
	Fipronil Desulfinyl	106	117	97.4	116	9.79	16.2
	Fipronil Sulfide	87.8	90.6	89.5	101	3.10	10.2
	Fipronil Sulfone	81.2	78.3	71.6	87.0	3.59	14.8
	Fluazifop-P-butyl	105	104	96.7	114	1.44	16.7
	Fludioxonil	121	121	104	125	0.268	18.5
	Flumioxazin	189	191	182	235	0.990	25.0
	Flutolanil	93.1	91.4	74.7	93.1	1.88	21.9
	Fluxapyroxad	94.1	95.2	80.6	95.4	1.08	16.8
	Fonofos	86.6	84.8	91.3	105	2.12	13.7
	Hexazinone	96.1	100	92.0	106	4.10	8.66
	Imazalil	93.7	96.7	77.7	84.3	3.09	6.59
	Iprodione	109	102	110	123	6.70	11.7
	Malathion	93.3	91.0	88.2	99.8	2.52	12.4
	Metalaxyl	92.8	95.7	84.0	96.8	3.05	14.1
	Metolachlor	89.6	90.4	82.4	96.5	0.882	14.4
	Metribuzin	90.6	92.6	102	105	2.20	3.35
	Mevinphos	75.7	84.4	105	111	10.8	5.06
	Molinate	46.8	50.0	57.7	56.2	6.59	2.53
	Myclobutanil	92.2	95.7	82.5	98.4	3.69	15.9
	Naled	47.7	46.8	49.1	53.8	1.89	9.03
	Norflurazon	110	112	97.7	112	1.47	13.3
	Oxadiazon	82.0	83.9	76.2	85.7	2.36	11.7
	Oxyfluorfen	102	97.1	104	123	4.78	16.4
	Parathion Ethyl	87.9	93.1	90.9	105	5.83	14.4
	Parathion Methyl	112	110	117	125	2.11	6.41
	Pendimethalin	65.2	66.7	81.9	87.8	2.38	6.97
	Phorate	74.0	67.8	87.3	84.8	8.68	2.96
	Prodiamine	28.8	25.6	47.3	52.3	11.9	10.1
	Prometon	87.6	91.4	82.8	108	4.21	26.5
	Prometryn	95.4	95.7	67.9	72.5	0.268	6.51
	Pronamide	93.4	91.5	81.9	95.0	2.08	14.9
	Propiconazole	94.6	97.8	82.7	86.5	3.33	2.96
	Pyriproxyfen	89.2	91.8	69.7	83.7	2.91	18.2
	Simazine	98.1	103	101	110	4.94	9.23
	Sulfentrazone	100	97.6	85.0	102	2.89	14.0
	Tebuconazole	77.6	76.9	50.0	73.7	0.883	28.7
	Terbufos	93.7	95.4	109	119	1.84	8.60
	Terbutylazine	83.0	89.0	87.1	99.2	7.07	13.0
EPA 8321B	2,4-D	137					0.694
	2,4,5-T	125		92.5	86.2		7.06
	Acesulfame K	106		123	133		7.71
	Acetaminophen	91.5		93.9	95.3		1.51
	Acetamiprid	92.4		45.4	35.7		23.8
	Afidopyropen	70.4		64.2	51.9		21.2
	AMPA	88.6		76.0	77.6		1.94
	Bentazon	107					5.64
	Benzovindiflupyr	97.0		82.1	76.6		6.94
	Carbamazepine	86.8		46.0	44.6		3.01
	Clothianidin	97.8		55.3	58.4		5.62
	Dinotefuran	93.3		67.6	71.4		5.36
	Diuron	69.7		30.9	30.1		2.66
	Endothall	87.2		105	106		1.56

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8321B	Fenuron	94.4	32.6	33.7			3.31
	Fluridone	90.4	67.1	67.9			1.27
	Glufosinate	92.7	80.0	77.7			2.85
	Glyphosate	98.0	82.0	77.0			5.95
	Hydrocodone	100	56.1	60.2			7.00
	Ibuprofen	91.9	69.1	59.6			14.7
	Imazapyr	99.5					0.332
	Imidacloprid	98.3	91.5	86.2			5.67
	Linuron	70.7	52.7	52.0			1.35
	Mandestrobin	95.2	80.6	81.1			0.654
	MCPP	126	81.2	81.8			0.741
	Naproxen	61.8	76.4	63.5			18.5
	Primidone	105	58.5	62.6			6.75
	Pyraclostrobin	84.3	71.6	75.1			4.76
	Sucralose	99.0	102	102			0.147
	Thiamethoxam	107	70.9	73.0			2.97
	Tolfenpyrad	58.3	50.5	51.9			2.67
	Triclopyr	129	94.3	92.6			1.82
SM 2120 B-2011	Color (true)	99.6				1.82	
SM 2320 B-2011	Total Alkalinity	102				2.34	
SM 2540 C-2011	TDS					2.33	
SM 4500 F-C-2011	Fluoride	101	100	102			0.946
SM 5310 B-2011	Organic Carbon	95.0	95.0	96.3			0.819

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2269254
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2269261
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2269261
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2269254
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2269254
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2269255
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2269255
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2269255
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2269255
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2269256
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2269262
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2269260
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2269254
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2269254
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2269261
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2269254
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2269254
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2269254
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2269255

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	08/12/2021			08/12/2021 16:06	Sarah A Nixon	2269254
EPA 200.7 Rev. 4.4	08/12/2021	08/17/2021 15:35	Elliott D. Healy	08/23/2021 21:39	Josef B Mick	2269261
EPA 200.8 Rev. 5.4	08/12/2021	08/17/2021 15:35	Elliott D. Healy	08/19/2021 18:35	Alexander Thompson	2269261
EPA 300.0 Rev. 2.1	08/12/2021			08/24/2021 04:02	Lipi Saha	2269254
EPA 350.1 Rev. 2.0	08/12/2021			08/17/2021 12:17	Roberta Tatti	2269255
EPA 351.2 Rev. 2.0	08/12/2021	08/25/2021 13:58	Benjamin T. Nordmann	08/26/2021 13:33	Virginia P. Brown	2269255
EPA 353.2 Rev. 2.0	08/12/2021			08/16/2021 11:33	Beverly Y. Sanders	2269255
EPA 365.1 Rev. 2.0	08/12/2021	08/17/2021 14:55	Simonne.V. Calhoun	08/24/2021 10:56	Lipi Saha	2269255
EPA 365.1 Rev. 2.0 dissolved	08/12/2021			08/12/2021 15:37	Blanca Fach	2269256
EPA 8270E	08/12/2021	08/13/2021 08:00	Rasheda Ghaffari	08/17/2021 23:50	Michael Poppell	2269262
EPA 8321B	08/12/2021	08/13/2021 09:00	Juyoung Kim	08/13/2021 12:07	Juyoung Kim	2269260
	08/12/2021	08/13/2021 09:00	Juyoung Kim	08/13/2021 13:35	Pramila Ghimire	2269260
	08/12/2021	08/18/2021 09:00	Hoor Shaik	08/25/2021 12:55	Juyoung Kim	2269260
SM 2120 B-2011	08/12/2021			08/12/2021 17:06	Sarah A Nixon	2269254
SM 2320 B-2011	08/12/2021			08/18/2021 00:13	Dale L. Simmons	2269254
SM 2340B	08/12/2021			08/23/2021 21:39	Josef B Mick	2269261
SM 2540 C-2011	08/12/2021			08/16/2021 15:36	Yijie Li	2269254
SM 2540 D-2011	08/12/2021			08/16/2021 15:36	Yijie Li	2269254
SM 4500 F-C-2011	08/12/2021			08/18/2021 00:13	Dale L. Simmons	2269254
SM 5310 B-2011	08/12/2021			08/26/2021 02:51	Madeline Gruver	2269255