

Chemical Analysis Report

NW-DIST-2021-08-06-02

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

Event Description: **Bioassessment**
Request ID: **RQ-2021-07-12-52**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 208
Pensacola, FL 32502-5794
Attn: Frank Butera

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: Thekkekalathil Chandrasekhar, Environmental Consultant

Date Certified: 31-AUG-2021 12:06



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: Juniper Creek Upstream of Eglin Rd 221

Collection Date/Time: 08/05/2021 10:00

Field ID: G3NW0170

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2267959	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P402143	
	EPA 300.0 Rev. 2.1	Chloride	2.4		mg Cl/L	P402413	
		Sulfate	0.76		mg SO4/L	P402416	
	SM 2120 B-2011	Color (true)	32		PCU	P402140	
	SM 2320 B-2011	Total Alkalinity	1.1	I	mg CaCO3/L	P402217	
	SM 2540 C-2011	TDS	17	I	mg/L	P402568	
	SM 2540 D-2011	TSS	2	I	mg/L	P402573	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P402219	
2267961	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P402387	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.084	I	mg N/L	P402885	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P402233	
	EPA 365.1 Rev. 2.0	Total-P	0.004	I	mg P/L	P402323	
	SM 5310 B-2011	Organic Carbon	2.6		mg C/L	P402839	
2267963	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P402139	
2267975	EPA 8321B	2,4-D	0.0020	U	ug/L	P402147	
		Acesulfame K	0.10	U	ug/L	P402154	
		2,4,5-T	0.0040	U	ug/L	P402147	
		AMPA	0.10	U	ug/L	P402154	MS
		Acetaminophen	0.0080	U	ug/L	P402147	
		Acetamiprid	0.0020	U	ug/L	P402147	
		Endothall	0.25	U	ug/L	P402154	
		Glufosinate	0.10	U	ug/L	P402154	
		Glyphosate	0.10	U	ug/L	P402154	
		Afidopyrophen	0.0020	U	ug/L	P402147	
		Bentazon	8.0E-04	U	ug/L	P402147	
		Sucralose	0.010	U	ug/L	P402154	
		Benzovindiflupyr	0.0020	U	ug/L	P402147	
		Carbamazepine	8.0E-04	U	ug/L	P402147	
		Clothianidin	0.0020	U	ug/L	P402147	
		Dinotefuran	0.0020	U	ug/L	P402147	
		Diuron	0.0020	U	ug/L	P402147	
		Fenuron	0.016	U	ug/L	P402147	
		Fluridone	8.0E-04	U	ug/L	P402147	
		Imazapyr	0.0040	U	ug/L	P402147	
		Hydrocodone	0.0020	U	ug/L	P402147	
		Ibuprofen	0.020	U	ug/L	P402147	
		Imidacloprid	0.0020	U	ug/L	P402147	MS
		Linuron	0.0040	U	ug/L	P402147	
		Mandestrobin	0.0020	U	ug/L	P402147	
		MCP	0.0020	U	ug/L	P402147	
		Naproxen	0.0080	U	ug/L	P402147	
		Primidone	0.0040	U	ug/L	P402147	
		Pyraclostrobin	0.0020	U	ug/L	P402147	

Field ID: G3NW0170

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2267975	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P402147	MS
		Tolfenpyrad	0.0020	U	ug/L	P402147	
		Triclopyr	0.0040	U	ug/L	P402147	
2267977	EPA 200.7 Rev. 4.4	Barium	9.4		ug/L	P402516	
		Calcium	0.70		mg/L	P402516	
		Iron	52	I	ug/L	P402516	
		Magnesium	0.33		mg/L	P402516	
		Manganese	3.6	I	ug/L	P402516	
		Potassium	0.30	U	mg/L	P402516	
		Sodium	1.5	I	mg/L	P402516	
		Zinc	5.0	U	ug/L	P402516	
	EPA 200.8 Rev. 5.4	Aluminum	113		ug/L	P402516	
		Antimony	0.050	U	ug/L	P402516	
		Arsenic	0.050	U	ug/L	P402516	
		Beryllium	0.016	I	ug/L	P402516	
		Boron**	7.2	I	ug/L	P402516	
		Cadmium	0.020	U	ug/L	P402516	
		Chromium	0.40	U	ug/L	P402516	
		Copper	0.40	U	ug/L	P402516	
		Lead	0.20	U	ug/L	P402516	
		Nickel	0.50	U	ug/L	P402516	
		Selenium	0.20	U	ug/L	P402516	
		Silver	0.010	U	ug/L	P402516	
		Thallium	0.10	U	ug/L	P402516	
	SM 2340B	Hardness	3.1		mg/L	P402516	
2267981	EPA 8270E	Acetochlor	0.25	U	ng/L	P402110	
		Alachlor	0.25	U	ng/L	P402110	
		Ametryn	0.61	U	ng/L	P402110	
		Atrazine	0.25	U	ng/L	P402110	
		Atrazine Desethyl	1.5	U	ng/L	P402110	
		Azinphos Methyl	2.0	U	ng/L	P402110	
		Azoxystrobin**	0.51	U	ng/L	P402110	
		Bromacil	4.6		ng/L	P402110	
		Butylate	0.41	U	ng/L	P402110	
		Caffeine**	7.6	U	ng/L	P402110	
		Carbophenothion	0.51	U	ng/L	P402110	
		Carfentrazone Ethyl**	0.10	U	ng/L	P402110	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P402110	
		Chlorpyrifos Methyl	0.051	U	ng/L	P402110	
		Cyanazine	3.3	U	ng/L	P402110	
		Demeton	1.5	U	ng/L	P402110	
		Diazinon	0.13	U	ng/L	P402110	
		Difenoconazole**	0.61	U	ng/L	P402110	
		Dimethenamid**	0.10	U	ng/L	P402110	
		Disulfoton	0.51	U	ng/L	P402110	

Field ID: G3NW0170

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2267981	EPA 8270E	Dithiopyr**	0.18	U	ng/L	P402110	
		EPTC	1.3	UJ	ng/L	P402110	LCS
		Ethion	0.15	U	ng/L	P402110	
		Ethoprop	0.10	U	ng/L	P402110	
		Fenamiphos	0.51	U	ng/L	P402110	
		Fenbuconazole**	0.13	U	ng/L	P402110	
		Fipronil	0.25	U	ng/L	P402110	
		Fipronil Desulfinyl**	0.13	U	ng/L	P402110	
		Fipronil Sulfide	0.15	U	ng/L	P402110	
		Fipronil Sulfone	0.15	U	ng/L	P402110	
		Fluazifop-P-butyl**	0.10	U	ng/L	P402110	
		Fludioxonil**	0.13	U	ng/L	P402110	
		Flumioxazin**	1.8	UJ	ng/L	P402110	RPD
		Flutolanil**	0.10	U	ng/L	P402110	
		Fluxapyroxad**	0.10	U	ng/L	P402110	RPD
		Fonofos	0.20	U	ng/L	P402110	
		Hexazinone	330		ng/L	P402110	
		Imazalil**	0.76	U	ng/L	P402110	
		Iprodione**	0.61	U	ng/L	P402110	
		Malathion	0.36	U	ng/L	P402110	
		Metaxyl	0.76	U	ng/L	P402110	
		Metolachlor	0.36	U	ng/L	P402110	
		Metribuzin	3.3	U	ng/L	P402110	
		Mevinphos	1.1	U	ng/L	P402110	
		Molinate	0.31	U	ng/L	P402110	
		Myclobutanil**	0.25	U	ng/L	P402110	
		Naled**	1.5	UJ	ng/L	P402110	LCS
		Norflurazon	0.51	U	ng/L	P402110	
		Oxadiazon	0.31	U	ng/L	P402110	
		Oxyfluorfen**	0.15	U	ng/L	P402110	
		Parathion Ethyl	0.25	U	ng/L	P402110	
		Parathion Methyl	0.56	U	ng/L	P402110	
		Pendimethalin	1.0	U	ng/L	P402110	
		Phorate	0.53	U	ng/L	P402110	
		Prodiamine**	0.18	UJ	ng/L	P402110	RPD
		Prometon	1.0	I	ng/L	P402110	
		Prometryn	0.20	U	ng/L	P402110	
		Pronamide**	0.15	U	ng/L	P402110	
		Propiconazole**	0.51	U	ng/L	P402110	
		Pyriproxyfen**	0.13	U	ng/L	P402110	
		Simazine	0.51	U	ng/L	P402110	
		Sulfentrazone**	0.51	U	ng/L	P402110	
		Tebuconazole**	0.51	U	ng/L	P402110	RPD
		Terbufos	0.10	U	ng/L	P402110	
		Terbutylazine	0.43	U	ng/L	P402110	

Field ID: G3NW0170

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
-----------	-------------	-----------	--------	------	-------	----------	----------

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 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Gap Creek powerline South of Overbrook Drive Collection Date/Time: 08/05/2021 13:00

Field ID: G3NW0142

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2267960	EPA 180.1 Rev. 2.0	Turbidity	3.6		NTU	P402143	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P402413	
		Sulfate	4.2		mg SO4/L	P402416	
	SM 2120 B-2011	Color (true)	67	A	PCU	P402141	
	SM 2320 B-2011	Total Alkalinity	30		mg CaCO3/L	P402217	
	SM 2540 C-2011	TDS	78		mg/L	P402568	
	SM 2540 D-2011	TSS	2	U	mg/L	P402573	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P402219	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.034		mg N/L	P402382	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.54	J	mg N/L	P402886	MS
2267962	EPA 353.2 Rev. 2.0	NO2NO3-N	0.074		mg N/L	P402233	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P402236	
	SM 5310 B-2011	Organic Carbon	8.4		mg C/L	P402839	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P402139	
	dissolved						
2267976	EPA 8321B	2,4-D	0.017		ug/L	P402147	
		Acesulfame K	0.23	I	ug/L	P402154	
		2,4,5-T	0.0040	U	ug/L	P402147	
		AMPA	0.10	U	ug/L	P402154	MS
		Acetaminophen	0.0080	U	ug/L	P402147	
		Acetamiprid	0.0020	U	ug/L	P402147	
		Endothall	0.25	U	ug/L	P402154	
		Glufosinate	0.10	U	ug/L	P402154	
		Glyphosate	0.10	U	ug/L	P402154	
		Afidopyrophen	0.0020	U	ug/L	P402147	
		Bentazon	0.0021	I	ug/L	P402147	
		Sucralose	0.18		ug/L	P402154	
		Benzovindiflupyr	0.0020	U	ug/L	P402147	
		Carbamazepine	8.0E-04	U	ug/L	P402147	
		Clothianidin	0.0055	I	ug/L	P402147	
		Dinotefuran	0.0020	U	ug/L	P402147	
		Diuron	0.0045	I	ug/L	P402147	
		Fenuron	0.016	U	ug/L	P402147	
		Fluridone	8.0E-04	U	ug/L	P402147	
		Imazapyr	0.030		ug/L	P402147	
		Hydrocodone	0.0020	U	ug/L	P402147	
		Ibuprofen	0.020	U	ug/L	P402147	
		Imidacloprid	0.032		ug/L	P402147	MS
		Linuron	0.0040	U	ug/L	P402147	
		Mandestrobin	0.0020	U	ug/L	P402147	
		MCP	0.011		ug/L	P402147	
		Naproxen	0.0080	U	ug/L	P402147	
		Primidone	0.0040	U	ug/L	P402147	
		Pyraclostrobin	0.0020	U	ug/L	P402147	

Field ID: G3NW0142

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2267976	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P402147	MS
		Tolfenpyrad	0.0020	U	ug/L	P402147	
		Triclopyr	0.0040	U	ug/L	P402147	
2267978	EPA 200.7 Rev. 4.4	Barium	11.3		ug/L	P402516	
		Calcium	11.2		mg/L	P402516	
		Iron	630		ug/L	P402516	
		Magnesium	1.05		mg/L	P402516	
		Manganese	13.9		ug/L	P402516	
		Potassium	0.80	I	mg/L	P402516	
		Sodium	10.5		mg/L	P402516	
		Zinc	5.0	U	ug/L	P402516	
	EPA 200.8 Rev. 5.4	Aluminum	229		ug/L	P402516	
		Antimony	0.058	I	ug/L	P402516	
		Arsenic	0.77		ug/L	P402516	
		Beryllium	0.010	U	ug/L	P402516	
		Boron**	33.4		ug/L	P402516	
		Cadmium	0.020	U	ug/L	P402516	
		Chromium	0.61	I	ug/L	P402516	
		Copper	0.60	I	ug/L	P402516	
		Lead	0.21	I	ug/L	P402516	
		Nickel	0.50	U	ug/L	P402516	
		Selenium	0.20	U	ug/L	P402516	
		Silver	0.010	U	ug/L	P402516	
		Thallium	0.10	U	ug/L	P402516	
		Hardness	32.3		mg/L	P402516	
	SM 2340B						
2267982	EPA 8270E	Acetochlor	0.25	U	ng/L	P402110	
		Alachlor	0.25	U	ng/L	P402110	
		Ametryn	0.61	U	ng/L	P402110	
		Atrazine	8.6		ng/L	P402110	
		Atrazine Desethyl	8.0		ng/L	P402110	
		Azinphos Methyl	2.0	U	ng/L	P402110	
		Azoxystrobin**	1.2	I	ng/L	P402110	
		Bromacil	2.0	I	ng/L	P402110	
		Butylate	0.41	U	ng/L	P402110	
		Caffeine**	12	I	ng/L	P402110	
		Carbophenothion	0.51	U	ng/L	P402110	
		Carfentrazone Ethyl**	0.10	U	ng/L	P402110	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P402110	
		Chlorpyrifos Methyl	0.051	U	ng/L	P402110	
		Cyanazine	3.3	U	ng/L	P402110	
		Demeton	1.5	U	ng/L	P402110	
		Diazinon	0.13	U	ng/L	P402110	
		Difenoconazole**	0.61	U	ng/L	P402110	
		Dimethenamid**	0.11	I	ng/L	P402110	
		Disulfoton	0.51	U	ng/L	P402110	

Field ID: G3NW0142

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2267982	EPA 8270E	Dithiopyr**	0.44	I	ng/L	P402110	
		EPTC	1.3	UJ	ng/L	P402110	LCS
		Ethion	0.15	U	ng/L	P402110	
		Ethoprop	0.10	U	ng/L	P402110	
		Fenamiphos	0.51	U	ng/L	P402110	
		Fenbuconazole**	0.13	U	ng/L	P402110	
		Fipronil	6.1		ng/L	P402110	
		Fipronil Desulfinyl**	0.68		ng/L	P402110	
		Fipronil Sulfide	7.6		ng/L	P402110	
		Fipronil Sulfone	9.9		ng/L	P402110	
		Fluazifop-P-butyl**	0.10	U	ng/L	P402110	
		Fludioxonil**	0.13	U	ng/L	P402110	
		Flumioxazin**	1.8	UJ	ng/L	P402110	RPD
		Flutolanil**	0.47		ng/L	P402110	
		Fluxapyroxad**	0.10	U	ng/L	P402110	RPD
		Fonofos	0.20	U	ng/L	P402110	
		Hexazinone	0.52	I	ng/L	P402110	
		Imazalil**	0.76	U	ng/L	P402110	
		Iprodione**	0.61	U	ng/L	P402110	
		Malathion	0.36	U	ng/L	P402110	
		Metalaxyl	0.76	U	ng/L	P402110	
		Metolachlor	0.36	U	ng/L	P402110	
		Metribuzin	3.3	U	ng/L	P402110	
		Mevinphos	1.1	U	ng/L	P402110	
		Molinate	0.31	U	ng/L	P402110	
		Myclobutanil**	0.25	U	ng/L	P402110	
		Naled**	1.5	UJ	ng/L	P402110	LCS
		Norflurazon	0.51	U	ng/L	P402110	
		Oxadiazon	0.31	U	ng/L	P402110	
		Oxyfluorfen**	0.15	U	ng/L	P402110	
		Parathion Ethyl	0.25	U	ng/L	P402110	
		Parathion Methyl	0.56	U	ng/L	P402110	
		Pendimethalin	1.9	I	ng/L	P402110	
		Phorate	0.53	U	ng/L	P402110	
		Prodiamine**	0.18	UJ	ng/L	P402110	RPD
		Prometon	1.8	I	ng/L	P402110	
		Prometryn	0.20	U	ng/L	P402110	
		Pronamide**	0.15	U	ng/L	P402110	
		Propiconazole**	0.59	I	ng/L	P402110	
		Pyriproxyfen**	0.13	U	ng/L	P402110	
		Simazine	0.51	U	ng/L	P402110	
		Sulfentrazone**	11		ng/L	P402110	
		Tebuconazole**	0.51	U	ng/L	P402110	RPD
		Terbufos	0.10	U	ng/L	P402110	
		Terbutylazine	0.43	U	ng/L	P402110	

Field ID: G3NW0142

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
-----------	-------------	-----------	--------	------	-------	----------	----------

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 351.2 Rev. 2.0: Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8321B: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8270E: 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: P402143

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P402516

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: P402516

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: P402413

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P402416

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402382

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402387

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402885

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402886

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P402233

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P402236

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P402323

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402139

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

Reference Method: EPA 8270E
Batch ID: P402110

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P402110

Component	Result	Code	Units
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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P402110

Component	Result	Code	Units
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
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P402110

Component	Result	Code	Units
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

Reference Method: EPA 8321B

Batch ID: P402147

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: EPA 8321B

Batch ID: P402154

Component	Result	Code	Units
-----------	--------	------	-------

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P402154

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: SM 2120 B-2011
Batch ID: P402140

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B-2011
Batch ID: P402141

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P402217

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

Reference Method: SM 2540 C-2011
Batch ID: P402568

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P402573

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P402219

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P402839

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: P402516

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	110		P	85 - 115
Calcium	107		P	85 - 115
Iron	112		P	85 - 115
Magnesium	111		P	85 - 115
Manganese	105		P	85 - 115
Potassium	107		P	85 - 115
Sodium	104		P	85 - 115
Zinc	106		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P402516

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	103		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	104		P	85 - 115
Beryllium	95.9		P	85 - 115
Boron	103		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	102		P	85 - 115
Copper	105		P	85 - 115
Lead	106		P	85 - 115
Nickel	105		P	85 - 115
Selenium	105		P	85 - 115
Silver	111		P	85 - 115
Thallium	106		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P402413

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P402416

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P402382

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P402387

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402885

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402886

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	108		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P402233

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: P402236

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P402323

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	108		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402139

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

Reference Method: EPA 8270E
Batch ID: P402110

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	103	89.9	P/P	70 - 121
Alachlor	92.8	80.8	P/P	70 - 119
Ametryn	115	90.8	P/P	61 - 135
Atrazine	107	93.2	P/P	76 - 123
Atrazine Desethyl	69.9	60.3	P/P	35 - 140
Azinphos Methyl	118	103	P/P	57 - 163
Azoxystrobin	112	88.4	P/P	43 - 231
Bromacil	94.9	82.5	P/P	42 - 123
Butylate	37.3	34.5	P/P	34 - 92.0
Caffeine	109	100	P/P	70 - 130
Carbophenothion	116	90.9	P/P	61 - 121
Carfentrazone Ethyl	110	96.1	P/P	62 - 139
Chlorpyrifos Ethyl	98.6	80.2	P/P	67 - 121
Chlorpyrifos Methyl	112	87.9	P/P	67 - 120
Cyanazine	121	102	P/P	20 - 226
Demeton	102	89.7	P/P	35 - 125

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P402110

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Diazinon	107	90.9	P/P	70 - 122
Difenoconazole	183	148	P/P	56 - 186
Dimethenamid	80.0	67.1	P/P	67 - 119
Disulfoton	100	78.7	P/P	47 - 120
Dithiopyr	96.5	78.8	P/P	67 - 118
EPTC	33.8	28.6	P/F	33 - 90.0
Ethion	79.4	76.3	P/P	40 - 133
Ethoprop	96.1	85.1	P/P	61 - 121
Fenamiphos	106	92.1	P/P	31 - 139
Fenbuconazole	126	97.1	P/P	66 - 141
Fipronil	107	90.5	P/P	62 - 129
Fipronil Desulfinyl	108	92.5	P/P	59 - 126
Fipronil Sulfide	106	80.6	P/P	63 - 117
Fipronil Sulfone	83.0	73.5	P/P	57 - 117
Fluazifop-P-butyl	113	86.3	P/P	63 - 124
Fludioxonil	102	96.8	P/P	63 - 123
Flumioxazin	220	153	P/P	34 - 245
Flutolanil	103	91.2	P/P	56 - 131
Fluxapyroxad	81.5	67.9	P/P	57 - 117
Fonofos	97.5	78.6	P/P	61 - 116
Hexazinone	99.6	85.7	P/P	55 - 138
Imazalil	108	83.1	P/P	33 - 143
Iprodione	104	91.6	P/P	59 - 118
Malathion	112	91.6	P/P	62 - 138
Metalaxyl	89.3	78.5	P/P	24 - 147
Metolachlor	94.8	82.8	P/P	68 - 118
Metribuzin	113	91.1	P/P	20 - 239
Mevinphos	91.3	80.2	P/P	46 - 124
Molinate	52.6	46.9	P/P	46 - 100
Myclobutanil	96.3	82.6	P/P	32 - 149
Naled	20.3	19.0	F/F	32 - 95.0
Norflurazon	94.5	77.2	P/P	57 - 127
Oxadiazon	88.7	75.4	P/P	63 - 118
Oxyfluorfen	99.0	75.8	P/P	69 - 137
Parathion Ethyl	99.3	83.8	P/P	70 - 113
Parathion Methyl	125	100	P/P	71 - 130
Pendimethalin	78.0	67.7	P/P	55 - 118
Phorate	86.7	69.1	P/P	46 - 125
Prodiamine	125	85.3	P/P	20 - 141
Prometon	101	86.0	P/P	54 - 122
Prometryn	112	98.8	P/P	66 - 124
Pronamide	106	93.0	P/P	79 - 122
Propiconazole	88.3	69.5	P/P	61 - 126
Pyriproxyfen	91.7	79.6	P/P	52 - 131
Simazine	98.8	83.0	P/P	75 - 128
Sulfentrazone	82.5	63.5	P/P	20 - 132
Tebuconazole	39.7	37.0	P/P	20 - 116
Terbufos	109	93.0	P/P	61 - 117
Terbuthylazine	97.0	84.3	P/P	74 - 116

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P402147

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	96.5		P	40 - 150
2,4,5-T	90.2		P	40 - 150
Acetaminophen	75.1		P	30 - 150
Acetamiprid	77.9		P	40 - 150
Afidopyropen	53.3		P	40 - 150
Bentazon	92.8		P	30 - 150
Benzovindiflupyr	78.0		P	40 - 150
Carbamazepine	83.5		P	40 - 150
Clothianidin	82.0		P	40 - 150
Dinotefuran	79.9		P	40 - 150
Diuron	82.1		P	40 - 150
Fenuron	85.4		P	40 - 150
Fluridone	83.8		P	40 - 150
Hydrocodone	83.8		P	40 - 150
Ibuprofen	76.5		P	40 - 150
Imazapyr	88.2		P	40 - 150
Imidacloprid	83.1		P	40 - 150
Linuron	75.9		P	40 - 150
Mandestrobin	78.0		P	40 - 150
MCPP	95.5		P	40 - 150
Naproxen	82.6		P	40 - 150
Primidone	82.1		P	40 - 150
Pyraclostrobin	75.7		P	40 - 150
Thiamethoxam	86.2		P	40 - 150
Tolfenpyrad	46.0		P	30 - 150
Triclopyr	94.3		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P402154

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	93.4		P	40 - 150
AMPA	97.8		P	40 - 150
Endothall	61.2		P	40 - 150
Glufosinate	96.6		P	40 - 150
Glyphosate	92.9		P	40 - 150
Sucralose	79.5		P	40 - 150

Reference Method: SM 2120 B-2011

Batch ID: P402140

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.2		P	85 - 115

Reference Method: SM 2120 B-2011

Batch ID: P402141

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.2		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P402217

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

Reference Method: SM 4500 F-C-2011
Batch ID: P402219

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.9		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P402839

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P402516

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2267978	Barium	108	112	P/P	80 - 120
2267978	Calcium	106		P	80 - 120
2267978	Iron	108	118	P/P	80 - 120
2267978	Magnesium	108	115	P/P	80 - 120
2267978	Manganese	103	109	P/P	80 - 120
2267978	Potassium	104	109	P/P	80 - 120
2267978	Sodium	103		P	80 - 120
2267978	Zinc	106	110	P/P	80 - 120
2268448	Barium	108		P	80 - 120
2268448	Calcium	108		P	80 - 120
2268448	Iron	110		P	80 - 120
2268448	Magnesium	109		P	80 - 120
2268448	Manganese	104		P	80 - 120
2268448	Potassium	111		P	80 - 120
2268448	Sodium	106		P	80 - 120
2268448	Zinc	103		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P402516

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2267978	Aluminum	98.2	102	P/P	80 - 120
2267978	Antimony	97.2	99.4	P/P	80 - 120
2267978	Arsenic	98.0	100	P/P	80 - 120
2267978	Beryllium	98.4	100	P/P	80 - 120
2267978	Boron	99.9	104	P/P	80 - 120
2267978	Cadmium	96.5	100	P/P	80 - 120
2267978	Chromium	97.0	98.3	P/P	80 - 120
2267978	Copper	95.8	99.4	P/P	80 - 120
2267978	Lead	103	106	P/P	80 - 120
2267978	Nickel	97.5	98.8	P/P	80 - 120
2267978	Selenium	98.3	99.8	P/P	80 - 120
2267978	Silver	107	108	P/P	80 - 120
2267978	Thallium	104	106	P/P	80 - 120
2268448	Aluminum	99.8		P	80 - 120
2268448	Antimony	98.5		P	80 - 120
2268448	Arsenic	99.8		P	80 - 120
2268448	Beryllium	96.7		P	80 - 120
2268448	Boron	98.7		P	80 - 120
2268448	Cadmium	99.5		P	80 - 120
2268448	Chromium	99.5		P	80 - 120
2268448	Copper	101		P	80 - 120
2268448	Lead	105		P	80 - 120
2268448	Nickel	101		P	80 - 120
2268448	Selenium	99.8		P	80 - 120
2268448	Silver	108		P	80 - 120
2268448	Thallium	106		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P402413

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
---------------	-----------	---------	---------	-----------	----------------

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P402413

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2267746	Chloride	98.4		P	90 - 110
2267940	Chloride	93.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P402416

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2267746	Sulfate	98.1		P	90 - 110
2267940	Sulfate	99.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402382

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2268114	Ammonia-N	98.6	98.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402387

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2267898	Ammonia-N	99.8	98.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402885

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2267151	Kjeldahl Nitrogen	96.5	111	P/F	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402886

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2267962	Kjeldahl Nitrogen	89.0	95.8	F/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P402233

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2267948	NO2NO3-N	101	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P402236

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2267659	Total-P	106	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P402323

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2267941	Total-P	108	107	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P402139

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2267964	O-Phosphate-P	99.5	99.1	P/P	90 - 110

Reference Method: EPA 8270E
 Batch ID: P402110

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2267050	Acetochlor	81.5	89.1	P/P	66 - 122
2267050	Alachlor	71.7	84.4	P/P	65 - 122
2267050	Ametryn	94.8	113	P/P	45 - 173
2267050	Atrazine	94.4	95.9	P/P	70 - 134
2267050	Atrazine Desethyl	71.3	57.6	P/P	25 - 150
2267050	Azinphos Methyl	102	100	P/P	44 - 174
2267050	Azoxystrobin	107	87.5	P/P	10 - 268
2267050	Bromacil	83.9	83.3	P/P	31 - 145
2267050	Butylate	34.6	43.6	P/P	15 - 97.0
2267050	Caffeine	84.2	89.4	P/P	70 - 130
2267050	Carbophenothion	83.4	87.4	P/P	42 - 129
2267050	Carfentrazone Ethyl	78.4	87.3	P/P	62 - 145
2267050	Chlorpyrifos Ethyl	74.9	77.4	P/P	60 - 124
2267050	Chlorpyrifos Methyl	83.7	86.8	P/P	66 - 119
2267050	Cyanazine	109	102	P/P	17 - 225
2267050	Demeton	92.3	99.1	P/P	36 - 142
2267050	Diazinon	85.1	98.6	P/P	70 - 128
2267050	Difenoconazole	123	147	P/P	33 - 222
2267050	Dimethenamid	60.4	70.1	P/P	54 - 125
2267050	Disulfoton	78.1	81.5	P/P	49 - 133
2267050	Dithiopyr	71.2	81.1	P/P	55 - 123
2267050	EPTC	31.4	38.3	P/P	19 - 91.0
2267050	Ethion	82.9	80.4	P/P	13 - 143
2267050	Ethoprop	92.7	99.1	P/P	49 - 144
2267050	Fenamiphos	84.5	76.7	P/P	32 - 136
2267050	Fenbuconazole	102	109	P/P	73 - 148
2267050	Fipronil	84.5	85.8	P/P	57 - 129
2267050	Fipronil Desulfinyl	79.6	89.9	P/P	49 - 127
2267050	Fipronil Sulfide	71.0	73.4	P/P	44 - 127
2267050	Fipronil Sulfone	71.5	69.9	P/P	35 - 126
2267050	Fluazifop-P-butyl	70.6	90.2	P/P	67 - 129
2267050	Fludioxonil	81.5	79.2	P/P	61 - 126
2267050	Flumioxazin	161	186	P/P	38 - 279
2267050	Flutolanil	74.9	80.5	P/P	55 - 136
2267050	Fluxapyroxad	49.5	73.2	P/P	33 - 140
2267050	Fonofos	73.8	82.1	P/P	58 - 125
2267050	Hexazinone	84.5	89.4	P/P	57 - 148
2267050	Imazail	97.1	84.4	P/P	10 - 221
2267050	Iprodione	82.5	86.3	P/P	32 - 140
2267050	Malathion	94.2	80.6	P/P	52 - 138
2267050	Metalaxyl	70.2	76.0	P/P	46 - 134
2267050	Metolachlor	69.4	76.7	P/P	58 - 122
2267050	Metribuzin	99.4	92.7	P/P	16 - 272
2267050	Mevinphos	102	111	P/P	45 - 140
2267050	Molinate	53.0	59.6	P/P	41 - 103
2267050	Myclobutanil	76.3	83.4	P/P	60 - 134

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P402110

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2267050	Naled	21.3	25.0	P/P	20 - 113
2267050	Norflurazon	74.0	72.1	P/P	51 - 123
2267050	Oxadiazon	69.5	72.2	P/P	44 - 125
2267050	Oxyfluorfen	81.8	97.4	P/P	66 - 176
2267050	Parathion Ethyl	83.5	88.3	P/P	57 - 132
2267050	Parathion Methyl	112	115	P/P	59 - 156
2267050	Pendimethalin	70.1	69.2	P/P	59 - 129
2267050	Phorate	74.6	82.9	P/P	47 - 136
2267050	Prodiamine	45.4	53.8	P/P	10 - 159
2267050	Prometon	82.1	66.4	P/P	59 - 127
2267050	Prometryn	89.1	86.5	P/P	59 - 129
2267050	Pronamide	89.5	98.6	P/P	65 - 145
2267050	Propiconazole	45.4	58.3	P/P	28 - 165
2267050	Pyriproxyfen	66.9	74.9	P/P	21 - 180
2267050	Simazine	89.3	83.5	P/P	63 - 147
2267050	Sulfentrazone	68.2	70.2	P/P	32 - 136
2267050	Tebuconazole	24.3	37.8	P/P	-8.3 - 117
2267050	Terbufos	93.8	99.2	P/P	61 - 131
2267050	Terbutylazine	84.5	84.4	P/P	62 - 126

Reference Method: EPA 8321B
Batch ID: P402147

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2267226	2,4,5-T	120	104	P/P	40 - 150
2267226	Acetaminophen	98.7	111	P/P	30 - 150
2267226	Acetamiprid	83.4	84.7	P/P	40 - 150
2267226	Afidopyropen	70.6	65.5	P/P	40 - 150
2267226	Bentazon	84.7	93.5	P/P	30 - 150
2267226	Benzovindiflupyr	83.3	87.2	P/P	40 - 150
2267226	Carbamazepine	97.1	105	P/P	40 - 150
2267226	Clothianidin	112	121	P/P	40 - 150
2267226	Dinotefuran	112	130	P/P	40 - 150
2267226	Diuron	74.8	79.0	P/P	40 - 150
2267226	Fenuron	78.7	89.6	P/P	40 - 150
2267226	Fluridone	82.0	78.2	P/P	40 - 150
2267226	Hydrocodone	94.9	104	P/P	40 - 150
2267226	Ibuprofen	78.9	75.4	P/P	40 - 150
2267226	Imazapyr	121	138	P/P	40 - 150
2267226	Imidacloprid	169	172	F/F	40 - 150
2267226	Linuron	76.8	81.4	P/P	40 - 150
2267226	Mandestrobin	84.7	91.4	P/P	40 - 150
2267226	MCPP	135	131	P/P	40 - 150
2267226	Naproxen	116	115	P/P	40 - 150
2267226	Primidone	98.2	112	P/P	40 - 150
2267226	Pyraclostrobin	83.4	92.3	P/P	40 - 150
2267226	Thiamethoxam	138	150	P/F	40 - 150
2267226	Tolfenpyrad	54.2	58.1	P/P	30 - 150
2267226	Triclopyr	122	113	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P402154

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2267970	Acesulfame K	67.0	62.6	P/P	40 - 150
2267970	AMPA	19.7	20.6	F/F	40 - 150
2267970	Endothall	85.8	86.1	P/P	40 - 150
2267970	Glufosinate	84.5	79.1	P/P	40 - 150
2267970	Glyphosate	50.8	50.5	P/P	40 - 150
2267970	Sucralose	86.9	86.7	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P402219

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2267928	Fluoride	100	99.2	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P402839

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2267840	Organic Carbon	96.5	96.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P402143

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267837	Turbidity	1.51	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P402516

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267978	Barium	4.27	Spike	P	0 - 20
2267978	Calcium	5.55	Spike	P	0 - 20
2267978	Iron	7.99	Spike	P	0 - 20
2267978	Magnesium	5.41	Spike	P	0 - 20
2267978	Manganese	5.14	Spike	P	0 - 20
2267978	Potassium	4.43	Spike	P	0 - 20
2267978	Sodium	5.49	Spike	P	0 - 20
2267978	Zinc	4.42	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P402516

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267978	Aluminum	2.64	Spike	P	0 - 20
2267978	Antimony	2.29	Spike	P	0 - 20
2267978	Arsenic	2.24	Spike	P	0 - 20
2267978	Beryllium	2.11	Spike	P	0 - 20
2267978	Boron	3.22	Spike	P	0 - 20
2267978	Cadmium	3.63	Spike	P	0 - 20
2267978	Chromium	1.33	Spike	P	0 - 20
2267978	Copper	3.63	Spike	P	0 - 20
2267978	Lead	3.11	Spike	P	0 - 20
2267978	Nickel	1.32	Spike	P	0 - 20
2267978	Selenium	1.50	Spike	P	0 - 20
2267978	Silver	1.22	Spike	P	0 - 20
2267978	Thallium	1.79	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P402413

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267746	Chloride	1.30	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P402416

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267746	Sulfate	1.96	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P402382

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2268114	Ammonia-N	0.0	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P402387

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267898	Ammonia-N	1.19	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P402885

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267151	Kjeldahl Nitrogen	8.13	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P402886

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267962	Kjeldahl Nitrogen	4.94	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P402233

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267948	NO2NO3-N	0.438	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P402236

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267659	Total-P	0.161	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P402323

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267941	Total-P	0.724	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P402139

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267964	O-Phosphate-P	0.403	Spike	P	0 - 20

Quality Assurance Report

Precision

Reference Method: EPA 8270E
Batch ID: P402110

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267050	Acetochlor	8.91	Spike	P	0 - 30
2267050	Alachlor	10.2	Spike	P	0 - 30
2267050	Ametryn	17.9	Spike	P	0 - 30
2267050	Atrazine	1.37	Spike	P	0 - 30
2267050	Atrazine Desethyl	21.3	Spike	P	0 - 30
2267050	Azinphos Methyl	1.49	Spike	P	0 - 30
2267050	Azoxystrobin	17.0	Spike	P	0 - 30
2267050	Bromacil	0.715	Spike	P	0 - 30
2267050	Butylate	23.2	Spike	P	0 - 30
2267050	Caffeine	3.98	Spike	P	0 - 30
2267050	Carbophenothion	4.68	Spike	P	0 - 30
2267050	Carfentrazone Ethyl	10.8	Spike	P	0 - 30
2267050	Chlorpyrifos Ethyl	3.19	Spike	P	0 - 30
2267050	Chlorpyrifos Methyl	3.63	Spike	P	0 - 30
2267050	Cyanazine	7.38	Spike	P	0 - 30
2267050	Demeton	7.13	Spike	P	0 - 30
2267050	Diazinon	14.7	Spike	P	0 - 30
2267050	Difenoconazole	18.1	Spike	P	0 - 30
2267050	Dimethenamid	14.9	Spike	P	0 - 30
2267050	Disulfoton	4.27	Spike	P	0 - 30
2267050	Dithiopyr	13.0	Spike	P	0 - 30
2267050	EPTC	19.9	Spike	P	0 - 30
2267050	Ethion	3.02	Spike	P	0 - 30
2267050	Ethoprop	6.66	Spike	P	0 - 30
2267050	Fenamiphos	9.71	Spike	P	0 - 30
2267050	Fenbuconazole	6.51	Spike	P	0 - 30
2267050	Fipronil	1.53	Spike	P	0 - 30
2267050	Fipronil Desulfinyl	12.1	Spike	P	0 - 30
2267050	Fipronil Sulfide	3.37	Spike	P	0 - 30
2267050	Fipronil Sulfone	2.23	Spike	P	0 - 30
2267050	Fluazifop-P-butyl	24.4	Spike	P	0 - 30
2267050	Fludioxonil	2.94	Spike	P	0 - 30
2267050	Flumioxazin	14.2	Spike	P	0 - 30
2267050	Flutolanil	6.01	Spike	P	0 - 30
2267050	Fluxapyroxad	38.6	Spike	F	0 - 30
2267050	Fonofos	10.7	Spike	P	0 - 30
2267050	Hexazinone	5.70	Spike	P	0 - 30
2267050	Imazalil	13.9	Spike	P	0 - 30
2267050	Iprodione	4.57	Spike	P	0 - 30
2267050	Malathion	15.6	Spike	P	0 - 30
2267050	Metalaxyl	7.86	Spike	P	0 - 30
2267050	Metolachlor	6.88	Spike	P	0 - 30
2267050	Metribuzin	6.90	Spike	P	0 - 30
2267050	Mevinphos	9.05	Spike	P	0 - 30
2267050	Molinate	11.7	Spike	P	0 - 30
2267050	Myclobutanil	8.95	Spike	P	0 - 30
2267050	Naled	16.0	Spike	P	0 - 30
2267050	Norflurazon	1.87	Spike	P	0 - 30
2267050	Oxadiazon	3.78	Spike	P	0 - 30
2267050	Oxyfluorfen	17.4	Spike	P	0 - 30
2267050	Parathion Ethyl	5.62	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E
Batch ID: P402110

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267050	Parathion Methyl	2.68	Spike	P	0 - 30
2267050	Pendimethalin	1.32	Spike	P	0 - 30
2267050	Phorate	10.4	Spike	P	0 - 30
2267050	Prodiamine	17.0	Spike	P	0 - 30
2267050	Prometon	21.2	Spike	P	0 - 30
2267050	Prometryn	2.96	Spike	P	0 - 30
2267050	Pronamide	9.66	Spike	P	0 - 30
2267050	Propiconazole	24.8	Spike	P	0 - 30
2267050	Pyriproxyfen	11.3	Spike	P	0 - 30
2267050	Simazine	6.79	Spike	P	0 - 30
2267050	Sulfentrazone	2.84	Spike	P	0 - 30
2267050	Tebuconazole	43.2	Spike	F	0 - 30
2267050	Terbufos	5.63	Spike	P	0 - 30
2267050	Terbuthylazine	0.121	Spike	P	0 - 30
LFB	Acetochlor	13.8	LCS	P	0 - 30
LFB	Alachlor	13.7	LCS	P	0 - 30
LFB	Ametryn	23.7	LCS	P	0 - 30
LFB	Atrazine	13.4	LCS	P	0 - 30
LFB	Atrazine Desethyl	14.9	LCS	P	0 - 30
LFB	Azinphos Methyl	13.8	LCS	P	0 - 30
LFB	Azoxystrobin	23.4	LCS	P	0 - 30
LFB	Bromacil	14.0	LCS	P	0 - 30
LFB	Butylate	7.78	LCS	P	0 - 30
LFB	Caffeine	8.39	LCS	P	0 - 30
LFB	Carbophenothion	24.1	LCS	P	0 - 30
LFB	Carfentrazone Ethyl	13.2	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	20.6	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	24.1	LCS	P	0 - 30
LFB	Cyanazine	17.4	LCS	P	0 - 30
LFB	Demeton	12.8	LCS	P	0 - 30
LFB	Diazinon	16.2	LCS	P	0 - 30
LFB	Difenoconazole	21.0	LCS	P	0 - 30
LFB	Dimethenamid	17.6	LCS	P	0 - 30
LFB	Disulfoton	23.8	LCS	P	0 - 30
LFB	Dithiopyr	20.2	LCS	P	0 - 30
LFB	EPTC	16.7	LCS	P	0 - 30
LFB	Ethion	4.04	LCS	P	0 - 30
LFB	Ethoprop	12.1	LCS	P	0 - 30
LFB	Fenamiphos	14.0	LCS	P	0 - 30
LFB	Fenbuconazole	25.7	LCS	P	0 - 30
LFB	Fipronil	17.0	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	15.1	LCS	P	0 - 30
LFB	Fipronil Sulfide	26.8	LCS	P	0 - 30
LFB	Fipronil Sulfone	12.1	LCS	P	0 - 30
LFB	Fluazifop-P-butyl	26.6	LCS	P	0 - 30
LFB	Fludioxonil	4.83	LCS	P	0 - 30
LFB	Flumioxazin	35.8	LCS	F	0 - 30
LFB	Flutolanil	12.5	LCS	P	0 - 30
LFB	Fluxapyroxad	18.2	LCS	P	0 - 30
LFB	Fonofos	21.5	LCS	P	0 - 30
LFB	Hexazinone	15.0	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P402110

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Imazalil	25.8	LCS	P	0 - 30
LFB	Iprodione	12.9	LCS	P	0 - 30
LFB	Malathion	20.0	LCS	P	0 - 30
LFB	Metalaxyl	12.8	LCS	P	0 - 30
LFB	Metolachlor	13.5	LCS	P	0 - 30
LFB	Metribuzin	21.4	LCS	P	0 - 30
LFB	Mevinphos	12.9	LCS	P	0 - 30
LFB	Molinate	11.6	LCS	P	0 - 30
LFB	Myclobutanil	15.3	LCS	P	0 - 30
LFB	Naled	6.49	LCS	P	0 - 30
LFB	Norflurazon	20.1	LCS	P	0 - 30
LFB	Oxadiazon	16.2	LCS	P	0 - 30
LFB	Oxyfluorfen	26.5	LCS	P	0 - 30
LFB	Parathion Ethyl	17.0	LCS	P	0 - 30
LFB	Parathion Methyl	22.3	LCS	P	0 - 30
LFB	Pendimethalin	14.2	LCS	P	0 - 30
LFB	Phorate	22.6	LCS	P	0 - 30
LFB	Prodiamine	37.4	LCS	F	0 - 30
LFB	Prometon	16.3	LCS	P	0 - 30
LFB	Prometryn	12.8	LCS	P	0 - 30
LFB	Pronamide	13.4	LCS	P	0 - 30
LFB	Propiconazole	23.8	LCS	P	0 - 30
LFB	Pyriproxyfen	14.1	LCS	P	0 - 30
LFB	Simazine	17.4	LCS	P	0 - 30
LFB	Sulfentrazone	26.0	LCS	P	0 - 30
LFB	Tebuconazole	6.99	LCS	P	0 - 30
LFB	Terbufos	15.9	LCS	P	0 - 30
LFB	Terbutylazine	14.0	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P402147

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267226	2,4-D	3.44	Spike	P	0 - 30
2267226	2,4,5-T	14.0	Spike	P	0 - 30
2267226	Acetaminophen	11.7	Spike	P	0 - 30
2267226	Acetamiprid	1.63	Spike	P	0 - 30
2267226	Afidopyropen	7.41	Spike	P	0 - 30
2267226	Bentazon	9.86	Spike	P	0 - 30
2267226	Benzovindiflupyr	4.60	Spike	P	0 - 30
2267226	Carbamazepine	7.70	Spike	P	0 - 30
2267226	Clothianidin	7.64	Spike	P	0 - 30
2267226	Dinotefuran	14.6	Spike	P	0 - 30
2267226	Diuron	5.44	Spike	P	0 - 30
2267226	Fenuron	13.0	Spike	P	0 - 30
2267226	Fluridone	4.79	Spike	P	0 - 30
2267226	Hydrocodone	9.47	Spike	P	0 - 30
2267226	Ibuprofen	4.53	Spike	P	0 - 30
2267226	Imazapyr	12.7	Spike	P	0 - 30
2267226	Imidacloprid	1.35	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P402147

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267226	Linuron	5.81	Spike	P	0 - 30
2267226	Mandestrobin	7.60	Spike	P	0 - 30
2267226	MCCP	3.06	Spike	P	0 - 30
2267226	Naproxen	0.941	Spike	P	0 - 30
2267226	Primidone	12.7	Spike	P	0 - 30
2267226	Pyraclostrobin	10.2	Spike	P	0 - 30
2267226	Thiamethoxam	8.81	Spike	P	0 - 30
2267226	Tolfenpyrad	7.08	Spike	P	0 - 30
2267226	Triclopyr	7.01	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P402154

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267970	Acesulfame K	6.76	Spike	P	0 - 30
2267970	AMPA	4.69	Spike	P	0 - 30
2267970	Endothall	0.270	Spike	P	0 - 30
2267970	Glufosinate	6.54	Spike	P	0 - 30
2267970	Glyphosate	0.439	Spike	P	0 - 30
2267970	Sucralose	0.312	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P402140

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267954	Color (true)	0.336	Sample	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P402141

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267960	Color (true)	1.58	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P402217

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267928	Total Alkalinity	1.58	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P402568

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267837	TDS	6.37	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-2011
Batch ID: P402219

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267928	Fluoride	0.977	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P402839

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267840	Organic Carbon	0.0	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2267975

Field Sample ID: G3NW0170

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	112	P	30 - 160
EPA 8321B	Acetaminophen-d4	83.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	94.9	P	30 - 160
EPA 8321B	Diuron-d6	86.0	P	30 - 160
EPA 8321B	Endothall-d6	74.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	81.7	P	30 - 160
EPA 8321B	Ibuprofen-d3	84.5	P	30 - 160
EPA 8321B	Primidone-d5	95.2	P	30 - 160
EPA 8321B	Sucralose-d6	94.0	P	30 - 160

Lab Sample ID: 2267976

Field Sample ID: G3NW0142

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	121	P	30 - 160
EPA 8321B	Acetaminophen-d4	90.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	95.7	P	30 - 160
EPA 8321B	Diuron-d6	75.6	P	30 - 160
EPA 8321B	Endothall-d6	77.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	86.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	85.2	P	30 - 160
EPA 8321B	Primidone-d5	95.2	P	30 - 160
EPA 8321B	Sucralose-d6	93.0	P	30 - 160

Lab Sample ID: 2267981

Field Sample ID: G3NW0170

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	79.4	P	20 - 200
EPA 8270E	Simazine-d10	116	P	73 - 135
EPA 8270E	Terbufos-d10	97.7	P	58 - 130

Lab Sample ID: 2267982

Field Sample ID: G3NW0142

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	77.5	P	20 - 200
EPA 8270E	Simazine-d10	110	P	73 - 135
EPA 8270E	Terbufos-d10	99.6	P	58 - 130

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A107101

Included Lab Sample IDs: 2267963, 2267964

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.6	98.2	P/P	90 - 110
O-Phosphate-P	98.9	98.6	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A107102

Included Lab Sample IDs: 2267959, 2267960

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.8	99.9	P/P	90 - 115
Color (true)	99.9	101	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A107103

Included Lab Sample IDs: 2267959, 2267960

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	101	P/P	95 - 105

Reference Method: SM 2320 B-2011

Run ID: A107130

Included Lab Sample IDs: 2267959, 2267960

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	100	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A107130

Included Lab Sample IDs: 2267959, 2267960

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A107136

Included Lab Sample IDs: 2267961, 2267962

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

Reference Method: EPA 8321B

Run ID: A107150

Included Lab Sample IDs: 2267975, 2267976

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	95.1	95.1	P/P	50 - 150
2,4-D	95.1	89.5	P/P	50 - 150
2,4,5-T	97.5	99.2	P/P	50 - 150
2,4,5-T	97.9	97.5	P/P	50 - 150
Acetaminophen	90.6	94.6	P/P	60 - 160
Acetaminophen	92.0	90.6	P/P	60 - 160
Acetamiprid	100	106	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A107150

Included Lab Sample IDs: 2267975, 2267976

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetamiprid	99.9	100	P/P	50 - 150
Afidopyropen	91.7	97.2	P/P	50 - 150
Afidopyropen	93.1	91.7	P/P	50 - 150
Bentazon	108	110	P/P	50 - 160
Bentazon	110	109	P/P	50 - 160
Benzovindiflupyr	98.3	98.5	P/P	50 - 150
Benzovindiflupyr	99.4	98.3	P/P	50 - 150
Carbamazepine	101	104	P/P	60 - 150
Carbamazepine	104	103	P/P	60 - 150
Clothianidin	95.0	98.6	P/P	60 - 150
Clothianidin	98.6	102	P/P	60 - 150
Dinotefuran	98.8	103	P/P	50 - 150
Dinotefuran	98.9	98.8	P/P	50 - 150
Diuron	104	105	P/P	60 - 160
Diuron	105	110	P/P	60 - 160
Fenuron	101	102	P/P	60 - 150
Fenuron	102	104	P/P	60 - 150
Fluridone	102	103	P/P	60 - 160
Fluridone	103	101	P/P	60 - 160
Hydrocodone	104	103	P/P	60 - 150
Hydrocodone	105	104	P/P	60 - 150
Ibuprofen	91.2	98.6	P/P	50 - 160
Ibuprofen	98.6	93.6	P/P	50 - 160
Imazapyr	101	113	P/P	50 - 150
Imazapyr	113	91.7	P/P	50 - 150
Imidacloprid	95.6	97.8	P/P	60 - 150
Imidacloprid	97.8	99.2	P/P	60 - 150
Linuron	95.4	102	P/P	60 - 150
Linuron	97.9	95.4	P/P	60 - 150
Mandestrobin	100	97.3	P/P	50 - 150
Mandestrobin	97.3	99.8	P/P	50 - 150
MCPP	92.9	93.1	P/P	50 - 150
MCPP	95.7	92.9	P/P	50 - 150
Naproxen	105	95.4	P/P	50 - 160
Naproxen	110	105	P/P	50 - 160
Primidone	92.6	93.5	P/P	60 - 150
Primidone	93.5	96.8	P/P	60 - 150
Pyraclostrobin	101	99.9	P/P	60 - 150
Pyraclostrobin	99.9	101	P/P	60 - 150
Thiamethoxam	103	105	P/P	50 - 150
Thiamethoxam	106	103	P/P	50 - 150
Tolfenpyrad	93.6	96.6	P/P	60 - 150
Tolfenpyrad	96.6	94.0	P/P	60 - 150
Triclopyr	99.1	99.3	P/P	50 - 150
Triclopyr	99.3	95.1	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A107165

Included Lab Sample IDs: 2267975, 2267976

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
-----------	---------	---------	------------	----------------

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A107165

Included Lab Sample IDs: 2267975, 2267976

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	103	101	P/P	60 - 160
Endothall	70.2	67.0	P/P	60 - 160
Sucralose	90.1	80.4	P/P	60 - 160

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A107166

Included Lab Sample IDs: 2267959, 2267960

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

Reference Method: EPA 8321B

Run ID: A107167

Included Lab Sample IDs: 2267975, 2267976

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	96.7	99.0	P/P	60 - 160
Glufosinate	97.1	95.4	P/P	60 - 160
Glyphosate	92.0	99.4	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A107180

Included Lab Sample IDs: 2267962

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.5	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A107208

Included Lab Sample IDs: 2267961

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A107211

Included Lab Sample IDs: 2267961

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.7	98.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A107212

Included Lab Sample IDs: 2267962

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A107260

Included Lab Sample IDs: 2267981, 2267982

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	96.0		P	80 - 120
Alachlor	100		P	80 - 120
Ametryn	99.0		P	80 - 120
Atrazine	98.1		P	80 - 120
Atrazine Desethyl	109		P	80 - 120
Azinphos Methyl	107		P	80 - 120
Azoxystrobin	103		P	80 - 120
Bromacil	100		P	80 - 120
Butylate	103		P	80 - 120
Caffeine	94.9		P	70 - 120
Carbophenothion	101		P	80 - 120
Carfentrazone Ethyl	98.7		P	80 - 120
Chlorpyrifos Ethyl	98.6		P	80 - 120
Chlorpyrifos Methyl	102		P	80 - 120
Cyanazine	101		P	80 - 120
Demeton	113		P	80 - 120
Diazinon	100		P	80 - 120
Difenoconazole	82.1		P	80 - 120
Dimethenamid	97.0		P	80 - 120
Disulfoton	105		P	80 - 120
Dithiopyr	99.4		P	80 - 120
EPTC	102		P	80 - 120
Ethion	105		P	80 - 120
Ethoprop	116		P	80 - 120
Fenamiphos	92.2		P	80 - 120
Fenbuconazole	102		P	80 - 120
Fipronil	95.0		P	80 - 120
Fipronil Desulfinyl	103		P	80 - 120
Fipronil Sulfide	104		P	80 - 120
Fipronil Sulfone	96.5		P	80 - 120
Fluazifop-P-butyl	102		P	80 - 120
Fludioxonil	102		P	80 - 120
Flumioxazin	90.3		P	80 - 120
Flutolanil	97.7		P	80 - 120
Fluxapyroxad	99.4		P	80 - 120
Fonofos	108		P	80 - 120
Hexazinone	99.5		P	80 - 120
Imazalil	101		P	80 - 120
Iprodione	104		P	80 - 120
Malathion	92.7		P	80 - 120
Metaxyl	99.3		P	80 - 120
Metolachlor	97.8		P	80 - 120
Metribuzin	99.4		P	80 - 120
Mevinphos	119		P	80 - 120
Molinate	104		P	80 - 120
Myclobutanil	94.6		P	80 - 120
Naled	101		P	80 - 120
Norflurazon	105		P	80 - 120
Oxadiazon	101		P	80 - 120
Oxyfluorfen	90.9		P	80 - 120
Parathion Ethyl	104		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A107260

Included Lab Sample IDs: 2267981, 2267982

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Parathion Methyl	101		P	80 - 120
Pendimethalin	97.2		P	80 - 120
Phorate	119		P	80 - 120
Prodiamine	101		P	80 - 120
Prometon	96.0		P	80 - 120
Prometryn	95.1		P	80 - 120
Pronamide	90.7		P	80 - 120
Propiconazole	96.8		P	80 - 120
Pyriproxyfen	103		P	80 - 120
Simazine	99.6		P	80 - 120
Sulfentrazone	92.7		P	80 - 120
Tebuconazole	96.6		P	80 - 120
Terbufos	102		P	80 - 120
Terbutylazine	94.6		P	80 - 120

Reference Method: EPA 8270E

Run ID: A107266

Included Lab Sample IDs: 2267981, 2267982

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromacil	108		P	80 - 120
Fipronil Sulfide	105		P	80 - 120
Fipronil Sulfone	103		P	80 - 120
Hexazinone	98.1		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A107304

Included Lab Sample IDs: 2267977, 2267978

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	105	102	P/P	90 - 110
Iron	105	101	P/P	90 - 110
Magnesium	104	100	P/P	90 - 110
Manganese	104	102	P/P	90 - 110
Potassium	104	101	P/P	90 - 110
Sodium	103	99.6	P/P	90 - 110
Zinc	102	97.9	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A107337

Included Lab Sample IDs: 2267977, 2267978

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.2	99.4	P/P	90 - 110
Aluminum	98.9	98.2	P/P	90 - 110
Antimony	97.5	98.9	P/P	90 - 110
Antimony	98.9	98.5	P/P	90 - 110
Arsenic	102	100	P/P	90 - 110
Arsenic	100	97.9	P/P	90 - 110
Beryllium	94.9	94.9	P/P	90 - 110
Beryllium	96.6	94.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A107337

Included Lab Sample IDs: 2267977, 2267978

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Boron	95.4	98.9	P/P	90 - 110
Boron	98.9	98.0	P/P	90 - 110
Cadmium	100	98.8	P/P	90 - 110
Cadmium	97.3	100	P/P	90 - 110
Chromium	96.6	98.8	P/P	90 - 110
Chromium	98.8	96.9	P/P	90 - 110
Copper	98.3	98.8	P/P	90 - 110
Copper	98.8	94.8	P/P	90 - 110
Lead	102	102	P/P	90 - 110
Lead	102	102	P/P	90 - 110
Nickel	99.2	99.7	P/P	90 - 110
Nickel	99.7	96.7	P/P	90 - 110
Selenium	97.9	96.6	P/P	90 - 110
Selenium	98.3	97.9	P/P	90 - 110
Silver	103	105	P/P	90 - 110
Silver	105	102	P/P	90 - 110
Thallium	102	103	P/P	90 - 110
Thallium	103	102	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A107399

Included Lab Sample IDs: 2267961, 2267962

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.4	95.6	P/P	90 - 110
Organic Carbon	95.6	96.0	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A107416

Included Lab Sample IDs: 2267977, 2267978

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	100	98.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A107458

Included Lab Sample IDs: 2267961, 2267962

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.3	103	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							1.51	
EPA 200.7 Rev. 4.4	Barium	110		108	112	108			4.27
	Calcium	107		106	108				5.55
	Iron	112		108	118	110			7.99
	Magnesium	111		108	115	109			5.41
	Manganese	105		103	109	104			5.14
	Potassium	107		104	109	111			4.43
	Sodium	104		103	106				5.49
	Zinc	106		106	110	103			4.42
EPA 200.8 Rev. 5.4	Aluminum	103		98.2	102	99.8			2.64
	Antimony	102		97.2	99.4	98.5			2.29
	Arsenic	104		98.0	100	99.8			2.24
	Beryllium	95.9		98.4	100	96.7			2.11
	Boron	103		99.9	104	98.7			3.22
	Cadmium	102		96.5	100	99.5			3.63
	Chromium	102		97.0	98.3	99.5			1.33
	Copper	105		95.8	99.4	101			3.63
	Lead	106		103	106	105			3.11
	Nickel	105		97.5	98.8	101			1.32
	Selenium	105		98.3	99.8	99.8			1.50
	Silver	111		107	108	108			1.22
	Thallium	106		104	106	106			1.79
EPA 300.0 Rev. 2.1	Chloride	97.9		98.4	93.4			1.30	
	Sulfate	99.8		98.1	99.7			1.96	
EPA 350.1 Rev. 2.0	Ammonia-N	99.4		98.6	98.6				0.0
	Ammonia-N	98.4		99.8	98.2				1.19
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102		96.5	111				8.13
	Kjeldahl Nitrogen	108		89.0	95.8				4.94
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	101		101	100				0.438
EPA 365.1 Rev. 2.0	Total-P	107		106	106				0.161
	Total-P	108		108	107				0.724
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	103		99.5	99.1				0.403
EPA 8270E	Acetochlor	103	89.9	81.5	89.1	13.8			8.91
	Alachlor	92.8	80.8	71.7	84.4	13.7			10.2
	Ametryn	115	90.8	94.8	113	23.7			17.9
	Atrazine	107	93.2	94.4	95.9	13.4			1.37
	Atrazine Desethyl	69.9	60.3	71.3	57.6	14.9			21.3
	Azinphos Methyl	118	103	102	100	13.8			1.49
	Azoxystrobin	112	88.4	107	87.5	23.4			17.0
	Bromacil	94.9	82.5	83.9	83.3	14.0			0.715
	Butylate	37.3	34.5	34.6	43.6	7.78			23.2
	Caffeine	109	100	84.2	89.4	8.39			3.98
	Carbophenothion	116	90.9	83.4	87.4	24.1			4.68
	Carfentrazone Ethyl	110	96.1	78.4	87.3	13.2			10.8
	Chlorpyrifos Ethyl	98.6	80.2	74.9	77.4	20.6			3.19
	Chlorpyrifos Methyl	112	87.9	83.7	86.8	24.1			3.63
	Cyanazine	121	102	109	102	17.4			7.38
	Demeton	102	89.7	92.3	99.1	12.8			7.13
	Diazinon	107	90.9	85.1	98.6	16.2			14.7
	Difenoconazole	183	148	123	147	21.0			18.1
	Dimethenamid	80.0	67.1	60.4	70.1	17.6			14.9
	Disulfoton	100	78.7	78.1	81.5	23.8			4.27
	Dithiopyr	96.5	78.8	71.2	81.1	20.2			13.0
	EPTC	33.8	28.6	31.4	38.3	16.7			19.9

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Ethion	79.4	76.3	82.9	80.4	4.04	3.02
	Ethoprop	96.1	85.1	92.7	99.1	12.1	6.66
	Fenamiphos	106	92.1	84.5	76.7	14.0	9.71
	Fenbuconazole	126	97.1	102	109	25.7	6.51
	Fipronil	107	90.5	84.5	85.8	17.0	1.53
	Fipronil Desulfinyl	108	92.5	79.6	89.9	15.1	12.1
	Fipronil Sulfide	106	80.6	71.0	73.4	26.8	3.37
	Fipronil Sulfone	83.0	73.5	71.5	69.9	12.1	2.23
	Fluazifop-P-butyl	113	86.3	70.6	90.2	26.6	24.4
	Fludioxonil	102	96.8	81.5	79.2	4.83	2.94
	Flumioxazin	220	153	161	186	35.8	14.2
	Flutolanil	103	91.2	74.9	80.5	12.5	6.01
	Fluxapyroxad	81.5	67.9	49.5	73.2	18.2	38.6
	Fonofos	97.5	78.6	73.8	82.1	21.5	10.7
	Hexazinone	99.6	85.7	84.5	89.4	15.0	5.70
	Imazalil	108	83.1	97.1	84.4	25.8	13.9
	Iprodione	104	91.6	82.5	86.3	12.9	4.57
	Malathion	112	91.6	94.2	80.6	20.0	15.6
	Metalaxyl	89.3	78.5	70.2	76.0	12.8	7.86
	Metolachlor	94.8	82.8	69.4	76.7	13.5	6.88
	Metribuzin	113	91.1	99.4	92.7	21.4	6.90
	Mevinphos	91.3	80.2	102	111	12.9	9.05
	Molinate	52.6	46.9	53.0	59.6	11.6	11.7
	Myclobutanil	96.3	82.6	76.3	83.4	15.3	8.95
	Naled	20.3	19.0	21.3	25.0	6.49	16.0
	Norflurazon	94.5	77.2	74.0	72.1	20.1	1.87
	Oxadiazon	88.7	75.4	69.5	72.2	16.2	3.78
	Oxyfluorfen	99.0	75.8	81.8	97.4	26.5	17.4
	Parathion Ethyl	99.3	83.8	83.5	88.3	17.0	5.62
	Parathion Methyl	125	100	112	115	22.3	2.68
	Pendimethalin	78.0	67.7	70.1	69.2	14.2	1.32
	Phorate	86.7	69.1	74.6	82.9	22.6	10.4
	Prodiamine	125	85.3	45.4	53.8	37.4	17.0
	Prometon	101	86.0	82.1	66.4	16.3	21.2
	Prometryn	112	98.8	89.1	86.5	12.8	2.96
	Pronamide	106	93.0	89.5	98.6	13.4	9.66
	Propiconazole	88.3	69.5	45.4	58.3	23.8	24.8
	Pyriproxyfen	91.7	79.6	66.9	74.9	14.1	11.3
	Simazine	98.8	83.0	89.3	83.5	17.4	6.79
	Sulfentrazone	82.5	63.5	68.2	70.2	26.0	2.84
	Tebuconazole	39.7	37.0	24.3	37.8	6.99	43.2
	Terbufos	109	93.0	93.8	99.2	15.9	5.63
	Terbuthylazine	97.0	84.3	84.5	84.4	14.0	0.121
EPA 8321B	2,4-D	96.5					3.44
	2,4,5-T	90.2		120	104		14.0
	Acesulfame K	93.4		67.0	62.6		6.76
	Acetaminophen	75.1		98.7	111		11.7
	Acetamiprid	77.9		83.4	84.7		1.63
	Afidopyropen	53.3		70.6	65.5		7.41
	AMPA	97.8		19.7	20.6		4.69
	Bentazon	92.8		84.7	93.5		9.86
	Benzovindiflupyr	78.0		83.3	87.2		4.60
	Carbamazepine	83.5		97.1	105		7.70
	Clothianidin	82.0		112	121		7.64

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8321B	Dinotefuran	79.9	112	130			14.6
	Diuron	82.1	74.8	79.0			5.44
	Endothall	61.2	85.8	86.1			0.270
	Fenuron	85.4	78.7	89.6			13.0
	Fluridone	83.8	82.0	78.2			4.79
	Glufosinate	96.6	84.5	79.1			6.54
	Glyphosate	92.9	50.8	50.5			0.439
	Hydrocodone	83.8	94.9	104			9.47
	Ibuprofen	76.5	78.9	75.4			4.53
	Imazapyr	88.2	121	138			12.7
	Imidacloprid	83.1	169	172			1.35
	Linuron	75.9	76.8	81.4			5.81
	Mandestrobin	78.0	84.7	91.4			7.60
	MCPP	95.5	135	131			3.06
	Naproxen	82.6	116	115			0.941
	Primidone	82.1	98.2	112			12.7
	Pyraclostrobin	75.7	83.4	92.3			10.2
	Sucralose	79.5	86.9	86.7			0.312
	Thiamethoxam	86.2	138	150			8.81
	Tolfenpyrad	46.0	54.2	58.1			7.08
	Triclopyr	94.3	122	113			7.01
SM 2120 B-2011	Color (true)	98.2				0.336	
	Color (true)	98.2				1.58	
SM 2320 B-2011	Total Alkalinity	102				1.58	
SM 2540 C-2011	TDS					6.37	
SM 4500 F-C-2011	Fluoride	99.9	100	99.2			0.977
SM 5310 B-2011	Organic Carbon	96.6	96.5	96.5			0.0

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2267959, 2267960
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2267977, 2267978
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2267977, 2267978
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2267959, 2267960
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2267959, 2267960
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2267961, 2267962
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2267961, 2267962
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2267961, 2267962
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2267961, 2267962
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2267963, 2267964
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2267981, 2267982
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2267975, 2267976
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2267959, 2267960
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2267959, 2267960
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2267977, 2267978
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2267959, 2267960
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2267959, 2267960
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2267959, 2267960
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2267961, 2267962

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	08/06/2021			08/06/2021 14:57	Sarah A Nixon	2267959, 2267960
EPA 200.7 Rev. 4.4	08/06/2021	08/16/2021 16:10	Elliott D. Healy	08/17/2021 19:02	Josef B Mick	2267977
	08/06/2021	08/16/2021 16:10	Elliott D. Healy	08/17/2021 19:08	Josef B Mick	2267978
	08/06/2021	08/16/2021 16:10	Elliott D. Healy	08/24/2021 03:52	Josef B Mick	2267977
	08/06/2021	08/16/2021 16:10	Elliott D. Healy	08/24/2021 03:57	Josef B Mick	2267978
EPA 200.8 Rev. 5.4	08/06/2021	08/16/2021 16:10	Elliott D. Healy	08/18/2021 19:16	McKinley C Carter	2267978
	08/06/2021	08/16/2021 16:10	Elliott D. Healy	08/18/2021 20:28	McKinley C Carter	2267977
EPA 300.0 Rev. 2.1	08/06/2021			08/12/2021 04:11	Lipi Saha	2267959
	08/06/2021			08/12/2021 04:23	Lipi Saha	2267960
EPA 350.1 Rev. 2.0	08/06/2021			08/12/2021 12:48	Ping Hua	2267962
	08/06/2021			08/12/2021 12:51	Roberta Tatti	2267961
EPA 351.2 Rev. 2.0	08/06/2021	08/24/2021 13:34	Benjamin T. Nordmann	08/25/2021 09:45	Virginia P. Brown	2267961
	08/06/2021	08/24/2021 13:34	Benjamin T. Nordmann	08/25/2021 09:49	Virginia P. Brown	2267962
EPA 353.2 Rev. 2.0	08/06/2021			08/10/2021 09:32	Beverly Y. Sanders	2267961
	08/06/2021			08/10/2021 09:33	Beverly Y. Sanders	2267962
EPA 365.1 Rev. 2.0	08/06/2021	08/10/2021 13:06	Simonne.V. Calhoun	08/11/2021 11:43	Shengyu Ding	2267962
	08/06/2021	08/11/2021 13:55	Simonne.V. Calhoun	08/12/2021 12:46	Shengyu Ding	2267961
EPA 365.1 Rev. 2.0 dissolved	08/06/2021			08/06/2021 15:07	Blanca Fach	2267964
	08/06/2021			08/06/2021 15:14	Blanca Fach	2267963
EPA 8270E	08/06/2021	08/09/2021 08:00	Fe-Val Siddell	08/11/2021 00:35	Michael Poppell	2267981
	08/06/2021	08/09/2021 08:00	Fe-Val Siddell	08/11/2021 01:01	Michael Poppell	2267982
	08/06/2021	08/09/2021 08:00	Fe-Val Siddell	08/11/2021 19:06	Michael Poppell	2267981
	08/06/2021	08/09/2021 08:00	Fe-Val Siddell	08/11/2021 19:31	Michael Poppell	2267981
	08/06/2021	08/09/2021 08:00	Fe-Val Siddell	08/11/2021 20:48	Michael Poppell	2267982
EPA 8321B	08/06/2021	08/09/2021 08:30	Hoor Shaik	08/10/2021 08:31	Juyoung Kim	2267975
	08/06/2021	08/09/2021 08:30	Hoor Shaik	08/10/2021 10:15	Juyoung Kim	2267976
	08/06/2021	08/10/2021 10:30	Juyoung Kim	08/10/2021 12:51	Pramila Ghimire	2267975
	08/06/2021	08/10/2021 10:30	Juyoung Kim	08/10/2021 13:04	Pramila Ghimire	2267976
	08/06/2021	08/10/2021 10:30	Juyoung Kim	08/10/2021 18:00	Juyoung Kim	2267975
	08/06/2021	08/10/2021 10:30	Juyoung Kim	08/10/2021 18:11	Juyoung Kim	2267976
SM 2120 B-2011	08/06/2021			08/06/2021 16:13	Sarah A Nixon	2267959
	08/06/2021			08/06/2021 16:18	Sarah A Nixon	2267960
SM 2320 B-2011	08/06/2021			08/09/2021 19:29	Sarah A Nixon	2267959
	08/06/2021			08/09/2021 19:43	Sarah A Nixon	2267960
SM 2340B	08/06/2021			08/17/2021 19:02	Josef B Mick	2267977
	08/06/2021			08/17/2021 19:08	Josef B Mick	2267978
SM 2540 C-2011	08/06/2021			08/11/2021 14:58	Yijie Li	2267959, 2267960
SM 2540 D-2011	08/06/2021			08/11/2021 14:58	Yijie Li	2267959, 2267960
SM 4500 F-C-2011	08/06/2021			08/09/2021 19:29	Sarah A Nixon	2267959
	08/06/2021			08/09/2021 19:43	Sarah A Nixon	2267960

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-2011	08/06/2021			08/20/2021 23:32	Madeline Gruver	2267961
	08/06/2021			08/21/2021 01:25	Madeline Gruver	2267962