

Chemical Analysis Report

NW-DIST-2021-06-18-02

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

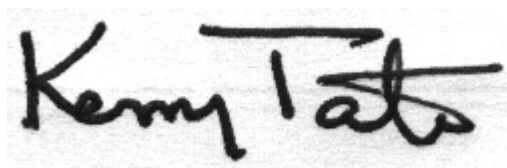
Event Description: **SMP Bioassessment**
Request ID: **RQ-2021-05-17-38**
Customer: **NW-DIST**
Project ID: **SMP**

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

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

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

Date Certified: 14-JUL-2021 15:24

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

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical groups are included in this report: Metals, Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Deadfall Creek Upstream of Old River Rd.

Collection Date/Time: 06/17/2021 13:30

Field ID: G4NW0491

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2255942	EPA 180.1 Rev. 2.0	Turbidity	3.8		NTU	P399958	
	EPA 300.0 Rev. 2.1	Chloride	3.7		mg Cl/L	P400506	
		Sulfate	1.1		mg SO4/L	P400507	
	SM 2120 B-2011	Color (true)	34		PCU	P399956	
	SM 2320 B-2011	Total Alkalinity	2.8	J	mg CaCO3/L	P400371	
	SM 2540 C-2011	TDS	15	U	mg/L	P400344	
	SM 2540 D-2011	TSS	10		mg/L	P400171	
2255944	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P400374	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P400334	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.22		mg N/L	P400040	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.36		mg N/L	P400028	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P400298	
2255946	SM 5310 B-2011	Organic Carbon	2.3		mg C/L	P400361	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.006	I	mg P/L	P399948	
2255966	EPA 8321B	2,4-D	0.0020	U	ug/L	P399973	
		Acesulfame K	0.10	U	ug/L	P399865	
		2,4,5-T	0.0040	U	ug/L	P399973	
		AMPA	0.10	U	ug/L	P399865	
		Acetaminophen	0.0080	U	ug/L	P399973	
		Acetamiprid	0.0020	U	ug/L	P399973	
		Endothall	0.25	U	ug/L	P399865	
		Glufosinate	0.10	U	ug/L	P399865	
		Glyphosate	0.10	U	ug/L	P399865	
		Afidopyropen	0.0020	U	ug/L	P399973	MS, RPD
		Bentazon	8.0E-04	U	ug/L	P399973	
		Sucralose	0.014	I	ug/L	P399865	
		Benzovindiflupyr	0.0020	U	ug/L	P399973	
		Carbamazepine	8.0E-04	U	ug/L	P399973	
		Clothianidin	0.0020	U	ug/L	P399973	
		Dinotefuran	0.0020	U	ug/L	P399973	
		Diuron	0.0020	U	ug/L	P399973	
		Fenuron	0.016	U	ug/L	P399973	
		Fluridone	8.0E-04	U	ug/L	P399973	
		Imazapyr	0.0040	U	ug/L	P399973	
		Hydrocodone	0.0020	U	ug/L	P399973	
		Ibuprofen	0.020	U	ug/L	P399973	
		Imidacloprid	0.0020	U	ug/L	P399973	
		Linuron	0.0040	U	ug/L	P399973	
		Mandestrobin	0.0020	U	ug/L	P399973	
		MCP	0.0020	U	ug/L	P399973	
		Naproxen	0.0080	U	ug/L	P399973	
		Primidone	0.0040	U	ug/L	P399973	
		Pyraclostrobin	0.0020	U	ug/L	P399973	

Field ID: G4NW0491

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2255966	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P399973	
		Tolfenpyrad	0.0020	U	ug/L	P399973	
		Triclopyr	0.0040	U	ug/L	P399973	
2255974	EPA 200.7 Rev. 4.4	Barium	14.9		ug/L	P399987	
		Calcium	1.14		mg/L	P399987	
		Iron	580		ug/L	P399987	
		Magnesium	0.69		mg/L	P399987	
		Manganese	17.0		ug/L	P399987	
		Potassium	0.30	I	mg/L	P399987	
		Sodium	1.9	I	mg/L	P399987	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P399987	
		Aluminum	130		ug/L	P399987	
		Antimony	0.050	U	ug/L	P399987	
		Arsenic	0.21		ug/L	P399987	
		Beryllium	0.062		ug/L	P399987	
		Boron**	8.9		ug/L	P399987	
		Cadmium	0.020	U	ug/L	P399987	
		Chromium	0.40	U	ug/L	P399987	
		Copper	0.40	U	ug/L	P399987	
		Lead	0.23	I	ug/L	P399987	
		Nickel	0.62	I	ug/L	P400451	
		Selenium	0.20	U	ug/L	P399987	
		Silver	0.010	U	ug/L	P399987	
		Thallium	0.10	U	ug/L	P399987	
	SM 2340B	Hardness	5.7		mg/L	P399987	
2255978	EPA 8270E	Acetochlor	0.26	U	ng/L	P399912	
		Alachlor	0.26	U	ng/L	P399912	
		Ametryn	0.63	U	ng/L	P399912	
		Atrazine	0.26	U	ng/L	P399912	
		Atrazine Desethyl	1.6	U	ng/L	P399912	
		Azinphos Methyl	2.1	U	ng/L	P399912	
		Azoxystrobin**	0.53	U	ng/L	P399912	
		Bromacil	0.53	U	ng/L	P399912	
		Butylate	0.42	U	ng/L	P399912	
		Caffeine**	7.9	U	ng/L	P399912	
		Carbophenothion	0.53	U	ng/L	P399912	
		Carfentrazone Ethyl**	0.11	U	ng/L	P399912	
		Chlorpyrifos Ethyl	0.26	U	ng/L	P399912	
		Chlorpyrifos Methyl	0.053	U	ng/L	P399912	
		Cyanazine	3.4	U	ng/L	P399912	
		Demeton	1.6	UJ	ng/L	P399912	LCS
		Diazinon	0.13	U	ng/L	P399912	
		Difenoconazole**	0.63	U	ng/L	P399912	
		Dimethenamid**	0.11	U	ng/L	P399912	
		Disulfoton	0.53	U	ng/L	P399912	

Field ID: G4NW0491

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2255978	EPA 8270E	Dithiopyr**	0.18	U	ng/L	P399912	RPD
		EPTC	1.3	U	ng/L	P399912	
		Ethion	0.16	U	ng/L	P399912	
		Ethoprop	0.11	U	ng/L	P399912	
		Fenamiphos	0.53	U	ng/L	P399912	
		Fenbuconazole**	0.13	U	ng/L	P399912	
		Fipronil	0.26	U	ng/L	P399912	
		Fipronil Desulfinyl**	0.13	U	ng/L	P399912	
		Fipronil Sulfide	0.16	U	ng/L	P399912	
		Fipronil Sulfone	0.16	U	ng/L	P399912	
		Fluazifop-P-butyl**	0.11	U	ng/L	P399912	
		Fludioxonil**	0.13	U	ng/L	P399912	
		Flumioxazin**	1.8	U	ng/L	P399912	
		Flutolanil**	0.11	U	ng/L	P399912	
		Fluxapyroxad**	0.11	U	ng/L	P399912	
		Fonofos	0.21	U	ng/L	P399912	
		Hexazinone	0.53	U	ng/L	P399912	
		Imazalil**	0.79	U	ng/L	P399912	
		Iprodione**	0.63	U	ng/L	P399912	
		Malathion	0.37	U	ng/L	P399912	
		Metalaxyl	0.79	U	ng/L	P399912	
		Metolachlor	1.6		ng/L	P399912	
		Metribuzin	3.4	U	ng/L	P399912	
		Mevinphos	1.1	U	ng/L	P399912	
		Molinate	0.32	U	ng/L	P399912	
		Myclobutanil**	0.26	U	ng/L	P399912	
		Naled**	1.6	U	ng/L	P399912	
		Norflurazon	0.53	U	ng/L	P399912	
		Oxadiazon	0.32	U	ng/L	P399912	
		Oxyfluorfen**	0.16	U	ng/L	P399912	
		Parathion Ethyl	0.26	U	ng/L	P399912	
		Parathion Methyl	0.58	U	ng/L	P399912	
		Pendimethalin	1.1	U	ng/L	P399912	
		Phorate	0.55	U	ng/L	P399912	MS
		Prodiamine**	0.18	U	ng/L	P399912	
		Prometon	0.95	U	ng/L	P399912	
		Prometryn	0.21	U	ng/L	P399912	RPD
		Pronamide**	0.16	U	ng/L	P399912	
		Propiconazole**	0.53	U	ng/L	P399912	
		Pyriproxyfen**	0.13	U	ng/L	P399912	
		Simazine	0.53	U	ng/L	P399912	
		Sulfentrazone**	0.53	U	ng/L	P399912	
		Tebuconazole**	0.53	UJ	ng/L	P399912	
		Terbufos	0.11	U	ng/L	P399912	
		Terbuthylazine	0.45	U	ng/L	P399912	

Field ID: G4NW0491

Matrix: W-SURF-FRH

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

Ref. Method and Comment:

SM 2320 B-2011: Analyte was detected above the MDL in both the continuing calibration blank and sample.

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: MS accuracy for atrazine and hexazinone 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.

Sample Location: Deadfall Creek Upstream of Jackson Rd.

Collection Date/Time: 06/17/2021 11:30

Field ID: G4NW0347

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2255943	EPA 180.1 Rev. 2.0	Turbidity	0.85		NTU	P399958	
	EPA 300.0 Rev. 2.1	Chloride	3.2		mg Cl/L	P400506	
		Sulfate	1.7		mg SO4/L	P400507	
	SM 2120 B-2011	Color (true)	17		PCU	P399956	
	SM 2320 B-2011	Total Alkalinity	1.5	I J	mg CaCO3/L	P400371	
	SM 2540 C-2011	TDS	16	I	mg/L	P400344	
	SM 2540 D-2011	TSS	2	U	mg/L	P400171	
2255945	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P400374	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P400335	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.12	I	mg N/L	P400040	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.32		mg N/L	P400029	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P400298	
2255947	SM 5310 B-2011	Organic Carbon	1.4		mg C/L	P400361	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P399948	
2255967	EPA 8321B	2,4-D	0.0020	U	ug/L	P399973	
		Acesulfame K	0.10	U	ug/L	P399865	
		2,4,5-T	0.0040	U	ug/L	P399973	
		AMPA	0.10	U	ug/L	P399865	
		Acetaminophen	0.0080	U	ug/L	P399973	
		Acetamiprid	0.0020	U	ug/L	P399973	
		Endothall	0.25	U	ug/L	P399865	
		Glufosinate	0.10	U	ug/L	P399865	
		Glyphosate	0.10	U	ug/L	P399865	
		Afidopyropen	0.0020	U	ug/L	P399973	MS, RPD
		Bentazon	8.0E-04	U	ug/L	P399973	
		Sucralose	0.010	U	ug/L	P399865	
		Benzovindiflupyr	0.0020	U	ug/L	P399973	
		Carbamazepine	8.0E-04	U	ug/L	P399973	
		Clothianidin	0.0020	U	ug/L	P399973	
		Dinotefuran	0.0020	U	ug/L	P399973	
		Diuron	0.0020	U	ug/L	P399973	
		Fenuron	0.016	U	ug/L	P399973	
		Fluridone	8.0E-04	U	ug/L	P399973	
		Imazapyr	0.0040	U	ug/L	P399973	
		Hydrocodone	0.0020	U	ug/L	P399973	
		Ibuprofen	0.020	U	ug/L	P399973	
		Imidacloprid	0.0020	U	ug/L	P399973	
		Linuron	0.0040	U	ug/L	P399973	
		Mandestrobin	0.0020	U	ug/L	P399973	
		MCP	0.0020	U	ug/L	P399973	
		Naproxen	0.0080	U	ug/L	P399973	
		Primidone	0.0040	U	ug/L	P399973	
		Pyraclostrobin	0.0020	U	ug/L	P399973	

Field ID: G4NW0347

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2255967	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P399973	
		Tolfenpyrad	0.0020	U	ug/L	P399973	
		Triclopyr	0.0040	U	ug/L	P399973	
2255975	EPA 200.7 Rev. 4.4	Barium	15.1		ug/L	P399987	
		Calcium	0.83		mg/L	P399987	
		Iron	180		ug/L	P399987	
		Magnesium	0.63		mg/L	P399987	
		Manganese	10.4		ug/L	P399987	
		Potassium	0.40	I	mg/L	P399987	
		Sodium	1.5	I	mg/L	P399987	
		Zinc	7.2	I	ug/L	P399987	
	EPA 200.8 Rev. 5.4	Aluminum	62		ug/L	P399987	
		Antimony	0.050	U	ug/L	P399987	
		Arsenic	0.063	I	ug/L	P399987	
		Beryllium	0.091		ug/L	P399987	
		Boron**	7.8	I	ug/L	P399987	
		Cadmium	0.020	U	ug/L	P399987	
		Chromium	0.40	U	ug/L	P399987	
		Copper	0.40	U	ug/L	P399987	
		Lead	0.20	U	ug/L	P399987	
		Nickel	0.97	I	ug/L	P400451	
		Selenium	0.20	U	ug/L	P399987	
		Silver	0.010	U	ug/L	P399987	
		Thallium	0.10	U	ug/L	P399987	
	SM 2340B	Hardness	4.6		mg/L	P399987	
2255979	EPA 8270E	Acetochlor	0.25	U	ng/L	P399912	
		Alachlor	0.25	U	ng/L	P399912	
		Ametryn	0.60	U	ng/L	P399912	
		Atrazine	0.25	U	ng/L	P399912	
		Atrazine Desethyl	1.5	U	ng/L	P399912	
		Azinphos Methyl	2.0	U	ng/L	P399912	
		Azoxystrobin**	0.50	U	ng/L	P399912	
		Bromacil	0.50	U	ng/L	P399912	
		Butylate	0.40	U	ng/L	P399912	
		Caffeine**	7.5	U	ng/L	P399912	
		Carbophenothion	0.50	U	ng/L	P399912	
		Carfentrazone Ethyl**	0.10	U	ng/L	P399912	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P399912	
		Chlorpyrifos Methyl	0.050	U	ng/L	P399912	
		Cyanazine	3.3	U	ng/L	P399912	
		Demeton	1.5	UJ	ng/L	P399912	LCS
		Diazinon	0.13	U	ng/L	P399912	
		Difenoconazole**	0.60	U	ng/L	P399912	
		Dimethenamid**	0.10	U	ng/L	P399912	
		Disulfoton	0.50	U	ng/L	P399912	

Field ID: G4NW0347

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2255979	EPA 8270E	Dithiopyr**	0.18	U	ng/L	P399912	RPD
		EPTC	1.3	U	ng/L	P399912	
		Ethion	0.15	U	ng/L	P399912	
		Ethoprop	0.10	U	ng/L	P399912	
		Fenamiphos	0.50	U	ng/L	P399912	
		Fenbuconazole**	0.13	U	ng/L	P399912	
		Fipronil	0.25	U	ng/L	P399912	
		Fipronil Desulfinyl**	0.13	U	ng/L	P399912	
		Fipronil Sulfide	0.15	U	ng/L	P399912	
		Fipronil Sulfone	0.15	U	ng/L	P399912	
		Fluazifop-P-butyl**	0.10	U	ng/L	P399912	
		Fludioxonil**	0.13	U	ng/L	P399912	
		Flumioxazin**	1.8	U	ng/L	P399912	
		Flutolanil**	0.10	U	ng/L	P399912	
		Fluxapyroxad**	0.10	U	ng/L	P399912	
		Fonofos	0.20	U	ng/L	P399912	
		Hexazinone	0.50	U	ng/L	P399912	
		Imazalil**	0.75	U	ng/L	P399912	
		Iprodione**	0.60	U	ng/L	P399912	
		Malathion	0.35	U	ng/L	P399912	
		Metalaxyl	0.75	U	ng/L	P399912	
		Metolachlor	0.35	U	ng/L	P399912	
		Metribuzin	3.3	U	ng/L	P399912	
		Mevinphos	1.1	U	ng/L	P399912	
		Molinate	0.30	U	ng/L	P399912	
		Myclobutanil**	0.25	U	ng/L	P399912	
		Naled**	1.5	U	ng/L	P399912	
		Norflurazon	0.50	U	ng/L	P399912	
		Oxadiazon	0.30	U	ng/L	P399912	
		Oxyfluorfen**	0.15	U	ng/L	P399912	
		Parathion Ethyl	0.25	U	ng/L	P399912	
		Parathion Methyl	0.55	U	ng/L	P399912	
		Pendimethalin	1.0	U	ng/L	P399912	
		Phorate	0.53	U	ng/L	P399912	MS
		Prodiamine**	0.18	U	ng/L	P399912	
		Prometon	0.90	U	ng/L	P399912	
		Prometryn	0.20	U	ng/L	P399912	
		Pronamide**	0.15	U	ng/L	P399912	RPD
		Propiconazole**	0.50	U	ng/L	P399912	
		Pyriproxyfen**	0.13	U	ng/L	P399912	
		Simazine	0.50	U	ng/L	P399912	
		Sulfentrazone**	0.50	U	ng/L	P399912	
		Tebuconazole**	0.50	UJ	ng/L	P399912	
		Terbufos	0.10	U	ng/L	P399912	
		Terbuthylazine	0.43	U	ng/L	P399912	

Field ID: G4NW0347

Matrix: W-SURF-FRH

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

Ref. Method and Comment:

SM 2320 B-2011: Analyte was detected above the MDL in both the continuing calibration blank and sample.

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: MS accuracy for atrazine and hexazinone 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: P399958

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P399987

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: P399987

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	2.00	U	ug/L
Lead	0.20	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P400451

Component	Result	Code	Units
Nickel	0.50	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P400506

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P400507

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P400334

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P400335

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P400040

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P400028

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P400029

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P400298

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P399948

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

Reference Method: EPA 8270E
Batch ID: P399912

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: P399912

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: P399912

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
Metaxyl	0.75	U	ng/L
Metaxyl	0.75	U	ng/L
Metolachlor	0.35	U	ng/L
Metolachlor	0.35	U	ng/L
Metribuzin	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: P399912

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: P399865

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: P399973

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P399973

Component	Result	Code	Units
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: P399956

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011

Batch ID: P400371

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

Reference Method: SM 2540 C-2011

Batch ID: P400344

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011

Batch ID: P400171

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011

Batch ID: P400374

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011

Batch ID: P400361

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: P399987

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	102		P	85 - 115
Calcium	109		P	85 - 115
Iron	110		P	85 - 115
Magnesium	111		P	85 - 115
Manganese	104		P	85 - 115
Potassium	103		P	85 - 115
Sodium	103		P	85 - 115
Zinc	98.5		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P399987

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	102		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	105		P	85 - 115
Beryllium	104		P	85 - 115
Boron	106		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	99.9		P	85 - 115
Copper	101		P	85 - 115
Lead	114		P	85 - 115
Selenium	103		P	85 - 115
Silver	99.6		P	85 - 115
Thallium	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P400451

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Nickel	108		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P400506

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P400507

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	96.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P400334

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P400335

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P400040

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P400028

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P400029

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P400298

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P399948

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

Reference Method: EPA 8270E
Batch ID: P399912

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	112	100	P/P	70 - 121
Alachlor	108	95.5	P/P	70 - 119
Ametryn	94.7	97.1	P/P	61 - 135
Atrazine	99.8	100	P/P	76 - 123
Atrazine Desethyl	72.3	69.9	P/P	35 - 140
Azinphos Methyl	111	127	P/P	57 - 163
Azoxystrobin	97.1	102	P/P	43 - 231
Bromacil	91.6	86.9	P/P	42 - 123
Butylate	59.9	60.0	P/P	34 - 92.0
Caffeine	81.7	78.3	P/P	70 - 130
Carbophenothion	103	101	P/P	61 - 121
Carfentrazone Ethyl	120	110	P/P	62 - 139
Chlorpyrifos Ethyl	90.4	86.6	P/P	67 - 121
Chlorpyrifos Methyl	87.8	89.0	P/P	67 - 120
Cyanazine	118	109	P/P	20 - 226
Demeton	30.3	29.9	F/F	35 - 125

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P399912

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Diazinon	100	97.8	P/P	70 - 122
Difenoconazole	126	151	P/P	56 - 186
Dimethenamid	84.9	77.7	P/P	67 - 119
Disulfoton	74.9	74.0	P/P	47 - 120
Dithiopyr	96.5	85.1	P/P	67 - 118
EPTC	39.2	40.9	P/P	33 - 90.0
Ethion	90.6	80.9	P/P	40 - 133
Ethoprop	77.0	83.1	P/P	61 - 121
Fenamiphos	97.6	95.4	P/P	31 - 139
Fenbuconazole	114	106	P/P	66 - 141
Fipronil	110	97.9	P/P	62 - 129
Fipronil Desulfinyl	117	101	P/P	59 - 126
Fipronil Sulfide	92.1	85.1	P/P	63 - 117
Fipronil Sulfone	89.4	81.1	P/P	57 - 117
Fluazifop-P-butyl	103	97.4	P/P	63 - 124
Fludioxonil	108	95.8	P/P	63 - 123
Flumioxazin	137	164	P/P	34 - 245
Flutolanil	102	90.3	P/P	56 - 131
Fluxapyroxad	99.3	86.1	P/P	57 - 117
Fonofos	77.7	81.6	P/P	61 - 116
Hexazinone	94.4	89.1	P/P	55 - 138
Imazalil	102	95.2	P/P	33 - 143
Iprodione	111	101	P/P	59 - 118
Malathion	105	105	P/P	62 - 138
Metalaxyl	105	93.6	P/P	24 - 147
Metolachlor	106	96.2	P/P	68 - 118
Metribuzin	98.6	98.9	P/P	20 - 239
Mevinphos	63.0	69.8	P/P	46 - 124
Molinate	49.2	56.4	P/P	46 - 100
Myclobutanil	98.4	92.4	P/P	32 - 149
Naled	38.8	43.8	P/P	32 - 95.0
Norflurazon	97.9	87.3	P/P	57 - 127
Oxadiazon	97.9	87.5	P/P	63 - 118
Oxyfluorfen	112	112	P/P	69 - 137
Parathion Ethyl	88.5	89.8	P/P	70 - 113
Parathion Methyl	99.8	104	P/P	71 - 130
Pendimethalin	86.8	89.0	P/P	55 - 118
Phorate	103	105	P/P	46 - 125
Prodiamine	44.1	48.4	P/P	20 - 141
Prometon	91.9	86.5	P/P	54 - 122
Prometryn	98.7	92.3	P/P	66 - 124
Pronamide	97.1	95.9	P/P	79 - 122
Propiconazole	104	88.2	P/P	61 - 126
Pyriproxyfen	97.3	93.5	P/P	52 - 131
Simazine	86.7	86.5	P/P	75 - 128
Sulfentrazone	85.9	77.1	P/P	20 - 132
Tebuconazole	94.3	63.7	P/P	20 - 116
Terbufos	91.3	93.5	P/P	61 - 117
Terbuthylazine	102	89.6	P/P	74 - 116

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P399865

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	80.5		P	40 - 150
AMPA	99.4		P	40 - 150
Endothall	71.4		P	40 - 150
Glufosinate	101		P	40 - 150
Glyphosate	103		P	40 - 150
Sucralose	102		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P399973

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	104		P	30 - 160
2,4,5-T	98.0		P	30 - 160
Acetaminophen	78.3		P	30 - 160
Acetamiprid	75.5		P	30 - 160
Afidopyropen	71.5		P	30 - 160
Bentazon	76.8		P	30 - 160
Benzovindiflupyr	84.2		P	30 - 160
Carbamazepine	88.8		P	30 - 160
Clothianidin	81.4		P	30 - 160
Dinotefuran	88.5		P	30 - 160
Diuron	79.9		P	30 - 160
Fenuron	89.1		P	30 - 160
Fluridone	90.7		P	30 - 160
Hydrocodone	78.0		P	30 - 160
Ibuprofen	77.0		P	30 - 160
Imazapyr	110		P	30 - 160
Imidacloprid	81.6		P	30 - 160
Linuron	72.2		P	30 - 160
Mandestrobin	101		P	30 - 160
MCPP	101		P	30 - 160
Naproxen	101		P	30 - 160
Primidone	90.5		P	30 - 160
Pyraclostrobin	78.0		P	30 - 160
Thiamethoxam	90.2		P	30 - 160
Tolfenpyrad	52.3		P	30 - 160
Triclopyr	93.3		P	30 - 160

Reference Method: SM 2120 B-2011
Batch ID: P399956

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.7		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P400371

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	94 - 106

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P400374

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.0		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P400361

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P399987

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2255313	Barium	101		P	80 - 120
2255313	Calcium	104		P	80 - 120
2255313	Iron	108		P	80 - 120
2255313	Magnesium	107		P	80 - 120
2255313	Manganese	102		P	80 - 120
2255313	Potassium	107		P	80 - 120
2255313	Sodium	100		P	80 - 120
2255313	Zinc	97.8		P	80 - 120
2255626	Barium	103	104	P/P	80 - 120
2255626	Calcium	111	111	P/P	80 - 120
2255626	Iron	112	112	P/P	80 - 120
2255626	Magnesium	113	112	P/P	80 - 120
2255626	Manganese	105	105	P/P	80 - 120
2255626	Potassium	109	108	P/P	80 - 120
2255626	Sodium	110	107	P/P	80 - 120
2255626	Zinc	98.4	99.6	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P399987

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2255313	Aluminum	104		P	80 - 120
2255313	Antimony	102		P	80 - 120
2255313	Arsenic	103		P	80 - 120
2255313	Beryllium	102		P	80 - 120
2255313	Boron	109		P	80 - 120
2255313	Cadmium	100		P	80 - 120
2255313	Chromium	99.5		P	80 - 120
2255313	Copper	104		P	80 - 120
2255313	Lead	118		P	80 - 120
2255313	Selenium	102		P	80 - 120
2255313	Silver	100		P	80 - 120
2255313	Thallium	105		P	80 - 120
2255626	Aluminum	102	102	P/P	80 - 120
2255626	Antimony	102	101	P/P	80 - 120
2255626	Arsenic	104	102	P/P	80 - 120
2255626	Beryllium	103	104	P/P	80 - 120
2255626	Boron	105	106	P/P	80 - 120
2255626	Cadmium	99.0	98.8	P/P	80 - 120
2255626	Chromium	99.8	98.8	P/P	80 - 120
2255626	Copper	103	101	P/P	80 - 120
2255626	Lead	116	115	P/P	80 - 120
2255626	Selenium	102	101	P/P	80 - 120
2255626	Silver	101	100	P/P	80 - 120
2255626	Thallium	105	104	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P400451

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2255346	Nickel	106	108	P/P	80 - 120
2255828	Nickel	107		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P400506

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2255816	Chloride	98.6		P	90 - 110
2256031	Chloride	96.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P400507

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2255816	Sulfate	95.8		P	90 - 110
2256031	Sulfate	97.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P400334

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2255650	Ammonia-N	97.4	96.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P400335

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2255945	Ammonia-N	96.0	95.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P400040

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2255818	Kjeldahl Nitrogen	104	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P400028

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2255818	NO2NO3-N	99.0	98.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P400029

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2255945	NO2NO3-N	96.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P400298

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2255926	Total-P	103	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P399948

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2255821	O-Phosphate-P	97.8	97.3	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P399912

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2255159	Acetochlor	106	113	P/P	66 - 122
2255159	Alachlor	90.7	103	P/P	65 - 122
2255159	Ametryn	92.9	86.5	P/P	45 - 173
2255159	Atrazine Desethyl	80.5	85.1	P/P	25 - 150
2255159	Azinphos Methyl	129	122	P/P	44 - 174
2255159	Azoxystrobin	107	123	P/P	10 - 268
2255159	Bromacil	82.3	94.6	P/P	31 - 145
2255159	Butylate	71.4	95.5	P/P	15 - 97.0
2255159	Caffeine	103	104	P/P	70 - 130
2255159	Carbophenothion	94.6	98.7	P/P	42 - 129
2255159	Carfentrazone Ethyl	101	104	P/P	62 - 145
2255159	Chlorpyrifos Ethyl	85.7	92.4	P/P	60 - 124
2255159	Chlorpyrifos Methyl	87.6	90.9	P/P	66 - 119
2255159	Cyanazine	97.9	110	P/P	17 - 225
2255159	Demeton	46.6	48.6	P/P	36 - 142
2255159	Diazinon	99.1	109	P/P	70 - 128
2255159	Difenoconazole	148	137	P/P	33 - 222
2255159	Dimethenamid	78.1	79.8	P/P	54 - 125
2255159	Disulfoton	91.9	69.4	P/P	49 - 133
2255159	Dithiopyr	84.4	96.9	P/P	55 - 123
2255159	EPTC	44.3	52.8	P/P	19 - 91.0
2255159	Ethion	63.7	44.2	P/P	13 - 143
2255159	Ethoprop	87.1	97.5	P/P	49 - 144
2255159	Fenamiphos	85.6	80.8	P/P	32 - 136
2255159	Fenbuconazole	101	107	P/P	73 - 148
2255159	Fipronil	95.2	96.4	P/P	57 - 129
2255159	Fipronil Desulfinyl	95.1	100	P/P	49 - 127
2255159	Fipronil Sulfide	76.0	73.8	P/P	44 - 127
2255159	Fipronil Sulfone	72.8	85.0	P/P	35 - 126
2255159	Fluazifop-P-butyl	90.7	97.8	P/P	67 - 129
2255159	Fludioxonil	90.9	92.8	P/P	61 - 126
2255159	Flumioxazin	173	172	P/P	38 - 279
2255159	Flutolanil	80.6	85.9	P/P	55 - 136
2255159	Fluxapyroxad	86.2	80.0	P/P	33 - 140
2255159	Fonofos	81.4	92.2	P/P	58 - 125
2255159	Imazalil	114	95.1	P/P	10 - 221
2255159	Iprodione	95.3	96.5	P/P	32 - 140
2255159	Malathion	96.5	103	P/P	52 - 138
2255159	Metaxyl	87.8	96.1	P/P	46 - 134
2255159	Metolachlor	92.6	102	P/P	58 - 122
2255159	Metribuzin	96.8	119	P/P	16 - 272
2255159	Mevinphos	76.6	87.6	P/P	45 - 140
2255159	Molinate	61.2	72.5	P/P	41 - 103
2255159	Myclobutanil	86.6	88.3	P/P	60 - 134
2255159	Naled	50.8	58.4	P/P	20 - 113
2255159	Norflurazon	86.0	88.9	P/P	51 - 123
2255159	Oxadiazon	85.0	86.2	P/P	44 - 125
2255159	Oxyfluorfen	113	106	P/P	66 - 176
2255159	Parathion Ethyl	87.5	96.7	P/P	57 - 132
2255159	Parathion Methyl	101	115	P/P	59 - 156
2255159	Pendimethalin	93.3	102	P/P	59 - 129
2255159	Phorate	145	161	F/F	47 - 136

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P399912

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2255159	Prodiamine	58.1	63.2	P/P	10 - 159
2255159	Prometon	84.3	96.3	P/P	59 - 127
2255159	Prometryn	85.0	89.4	P/P	59 - 129
2255159	Pronamide	100	108	P/P	65 - 145
2255159	Propiconazole	86.1	92.5	P/P	28 - 165
2255159	Pyriproxyfen	88.0	116	P/P	21 - 180
2255159	Simazine	92.4	109	P/P	63 - 147
2255159	Sulfentrazone	79.8	83.9	P/P	32 - 136
2255159	Tebuconazole	66.0	53.5	P/P	10 - 117
2255159	Terbufos	98.5	110	P/P	61 - 131
2255159	Terbutylazine	70.6	79.5	P/P	62 - 126

Reference Method: EPA 8321B
Batch ID: P399865

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2255020	Acesulfame K	84.0	86.4	P/P	40 - 150
2255020	AMPA	95.1	97.3	P/P	40 - 150
2255020	Endothall	70.2	82.7	P/P	40 - 150
2255020	Glufosinate	103	105	P/P	40 - 150
2255020	Glyphosate	106	111	P/P	40 - 150
2255020	Sucralose	99.7	103	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P399973

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2255827	2,4,5-T	104	87.5	P/P	30 - 160
2255827	Acetaminophen	97.1	89.2	P/P	30 - 160
2255827	Acetamiprid	77.8	58.4	P/P	30 - 160
2255827	Afidopyropen	67.5	6.62	P/F	30 - 160
2255827	Bentazon	64.4	59.5	P/P	30 - 160
2255827	Benzovindiflupyr	89.4	78.1	P/P	30 - 160
2255827	Carbamazepine	97.2	89.8	P/P	30 - 160
2255827	Clothianidin	95.7	99.6	P/P	30 - 160
2255827	Dinotefuran	114	93.7	P/P	30 - 160
2255827	Diuron	77.8	71.8	P/P	30 - 160
2255827	Fenuron	88.0	84.8	P/P	30 - 160
2255827	Fluridone	91.5	81.3	P/P	30 - 160
2255827	Hydrocodone	111	86.8	P/P	30 - 160
2255827	Ibuprofen	91.3	82.4	P/P	30 - 160
2255827	Imazapyr	158	140	P/P	30 - 160
2255827	Imidacloprid	127	116	P/P	30 - 160
2255827	Linuron	72.1	61.6	P/P	30 - 160
2255827	Mandestrobin	107	88.5	P/P	30 - 160
2255827	MCPP	104	93.8	P/P	30 - 160
2255827	Naproxen	80.3	97.0	P/P	30 - 160
2255827	Primidone	103	98.0	P/P	30 - 160
2255827	Pyraclostrobin	80.6	75.0	P/P	30 - 160
2255827	Thiamethoxam	128	117	P/P	30 - 160
2255827	Tolfenpyrad	54.2	48.1	P/P	30 - 160
2255827	Triclopyr	105	93.6	P/P	30 - 160

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P400374

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2255491	Fluoride	98.2	97.2	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P400361

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2255871	Organic Carbon	96.4	97.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P399958

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2255870	Turbidity	0.438	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P399987

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2255626	Barium	0.818	Spike	P	0 - 20
2255626	Calcium	0.0361	Spike	P	0 - 20
2255626	Iron	0.0727	Spike	P	0 - 20
2255626	Magnesium	0.296	Spike	P	0 - 20
2255626	Manganese	0.738	Spike	P	0 - 20
2255626	Potassium	1.28	Spike	P	0 - 20
2255626	Sodium	2.36	Spike	P	0 - 20
2255626	Zinc	1.20	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P399987

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2255626	Aluminum	0.0119	Spike	P	0 - 20
2255626	Antimony	1.45	Spike	P	0 - 20
2255626	Arsenic	1.74	Spike	P	0 - 20
2255626	Beryllium	0.853	Spike	P	0 - 20
2255626	Boron	0.622	Spike	P	0 - 20
2255626	Cadmium	0.112	Spike	P	0 - 20
2255626	Chromium	1.00	Spike	P	0 - 20
2255626	Copper	1.55	Spike	P	0 - 20
2255626	Lead	1.23	Spike	P	0 - 20
2255626	Selenium	0.706	Spike	P	0 - 20
2255626	Silver	0.321	Spike	P	0 - 20
2255626	Thallium	1.00	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P400451

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2255346	Nickel	1.87	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P400506

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2256031	Chloride	0.439	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P400507

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2256031	Sulfate	0.675	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P400334

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2255650	Ammonia-N	0.990	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P400335

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2255945	Ammonia-N	0.192	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P400040

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2255818	Kjeldahl Nitrogen	1.12	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P400028

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2255818	NO2NO3-N	0.506	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P400029

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2255945	NO2NO3-N	0.191	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P400298

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2255926	Total-P	1.05	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P399948

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2255821	O-Phosphate-P	0.513	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P399912

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2255159	Acetochlor	6.40	Spike	P	0 - 30
2255159	Alachlor	13.0	Spike	P	0 - 30
2255159	Ametryn	7.11	Spike	P	0 - 30
2255159	Atrazine	5.98	Spike	P	0 - 30
2255159	Atrazine Desethyl	5.55	Spike	P	0 - 30
2255159	Azinphos Methyl	5.80	Spike	P	0 - 30
2255159	Azoxystrobin	14.3	Spike	P	0 - 30
2255159	Bromacil	13.8	Spike	P	0 - 30
2255159	Butylate	28.9	Spike	P	0 - 30
2255159	Caffeine	0.609	Spike	P	0 - 30
2255159	Carbophenothion	4.23	Spike	P	0 - 30
2255159	Carfentrazone Ethyl	2.37	Spike	P	0 - 30
2255159	Chlorpyrifos Ethyl	7.52	Spike	P	0 - 30
2255159	Chlorpyrifos Methyl	3.66	Spike	P	0 - 30
2255159	Cyanazine	11.6	Spike	P	0 - 30
2255159	Demeton	4.32	Spike	P	0 - 30
2255159	Diazinon	9.75	Spike	P	0 - 30
2255159	Difenoconazole	7.65	Spike	P	0 - 30
2255159	Dimethenamid	2.14	Spike	P	0 - 30
2255159	Disulfoton	27.9	Spike	P	0 - 30
2255159	Dithiopyr	13.7	Spike	P	0 - 30
2255159	EPTC	17.5	Spike	P	0 - 30
2255159	Ethion	36.0	Spike	F	0 - 30
2255159	Ethoprop	11.3	Spike	P	0 - 30
2255159	Fenamiphos	5.74	Spike	P	0 - 30
2255159	Fenbuconazole	6.02	Spike	P	0 - 30
2255159	Fipronil	1.21	Spike	P	0 - 30
2255159	Fipronil Desulfinyl	5.09	Spike	P	0 - 30
2255159	Fipronil Sulfide	2.98	Spike	P	0 - 30
2255159	Fipronil Sulfone	14.0	Spike	P	0 - 30
2255159	Fluazifop-P-butyl	7.60	Spike	P	0 - 30
2255159	Fludioxonil	2.07	Spike	P	0 - 30
2255159	Flumioxazin	0.614	Spike	P	0 - 30
2255159	Flutolanil	6.30	Spike	P	0 - 30
2255159	Fluxapyroxad	7.13	Spike	P	0 - 30
2255159	Fonofos	12.5	Spike	P	0 - 30
2255159	Hexazinone	11.3	Spike	P	0 - 30
2255159	Imazalil	18.0	Spike	P	0 - 30
2255159	Iprodione	1.27	Spike	P	0 - 30
2255159	Malathion	6.59	Spike	P	0 - 30
2255159	Metalaxyl	9.00	Spike	P	0 - 30
2255159	Metolachlor	8.99	Spike	P	0 - 30
2255159	Metribuzin	20.6	Spike	P	0 - 30
2255159	Mevinphos	13.3	Spike	P	0 - 30
2255159	Molinate	16.9	Spike	P	0 - 30
2255159	Myclobutanil	1.95	Spike	P	0 - 30
2255159	Naled	13.8	Spike	P	0 - 30
2255159	Norflurazon	3.32	Spike	P	0 - 30
2255159	Oxadiazon	1.44	Spike	P	0 - 30
2255159	Oxyfluorfen	6.65	Spike	P	0 - 30
2255159	Parathion Ethyl	9.93	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P399912

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2255159	Parathion Methyl	12.8	Spike	P	0 - 30
2255159	Pendimethalin	9.34	Spike	P	0 - 30
2255159	Phorate	10.4	Spike	P	0 - 30
2255159	Prodiamine	8.44	Spike	P	0 - 30
2255159	Prometon	13.2	Spike	P	0 - 30
2255159	Prometryn	5.11	Spike	P	0 - 30
2255159	Pronamide	7.47	Spike	P	0 - 30
2255159	Propiconazole	7.17	Spike	P	0 - 30
2255159	Pyriproxyfen	27.1	Spike	P	0 - 30
2255159	Simazine	11.8	Spike	P	0 - 30
2255159	Sulfentrazone	5.04	Spike	P	0 - 30
2255159	Tebuconazole	21.0	Spike	P	0 - 30
2255159	Terbufos	11.1	Spike	P	0 - 30
2255159	Terbuthylazine	9.44	Spike	P	0 - 30
LFB	Acetochlor	11.4	LCS	P	0 - 30
LFB	Alachlor	12.6	LCS	P	0 - 30
LFB	Ametryn	2.42	LCS	P	0 - 30
LFB	Atrazine	0.128	LCS	P	0 - 30
LFB	Atrazine Desethyl	3.36	LCS	P	0 - 30
LFB	Azinphos Methyl	13.7	LCS	P	0 - 30
LFB	Azoxystrobin	5.38	LCS	P	0 - 30
LFB	Bromacil	5.23	LCS	P	0 - 30
LFB	Butylate	0.124	LCS	P	0 - 30
LFB	Caffeine	4.29	LCS	P	0 - 30
LFB	Carbophenothion	1.88	LCS	P	0 - 30
LFB	Carfentrazone Ethyl	8.87	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	4.35	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	1.33	LCS	P	0 - 30
LFB	Cyanazine	7.70	LCS	P	0 - 30
LFB	Demeton	1.47	LCS	P	0 - 30
LFB	Diazinon	2.54	LCS	P	0 - 30
LFB	Difenoconazole	17.6	LCS	P	0 - 30
LFB	Dimethenamid	8.82	LCS	P	0 - 30
LFB	Disulfoton	1.21	LCS	P	0 - 30
LFB	Dithiopyr	12.5	LCS	P	0 - 30
LFB	EPTC	4.26	LCS	P	0 - 30
LFB	Ethion	11.3	LCS	P	0 - 30
LFB	Ethoprop	7.51	LCS	P	0 - 30
LFB	Fenamiphos	2.32	LCS	P	0 - 30
LFB	Fenbuconazole	7.51	LCS	P	0 - 30
LFB	Fipronil	11.3	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	15.5	LCS	P	0 - 30
LFB	Fipronil Sulfide	7.97	LCS	P	0 - 30
LFB	Fipronil Sulfone	9.84	LCS	P	0 - 30
LFB	Fluazifop-P-butyl	5.89	LCS	P	0 - 30
LFB	Fludioxonil	12.2	LCS	P	0 - 30
LFB	Flumioxazin	18.4	LCS	P	0 - 30
LFB	Flutolanil	12.6	LCS	P	0 - 30
LFB	Fluxapyroxad	14.3	LCS	P	0 - 30
LFB	Fonofos	4.88	LCS	P	0 - 30
LFB	Hexazinone	5.77	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P399912

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Imazalil	6.82	LCS	P	0 - 30
LFB	Iprodione	10.1	LCS	P	0 - 30
LFB	Malathion	0.621	LCS	P	0 - 30
LFB	Metalaxyl	11.3	LCS	P	0 - 30
LFB	Metolachlor	9.20	LCS	P	0 - 30
LFB	Metribuzin	0.245	LCS	P	0 - 30
LFB	Mevinphos	10.2	LCS	P	0 - 30
LFB	Molinate	13.6	LCS	P	0 - 30
LFB	Myclobutanil	6.26	LCS	P	0 - 30
LFB	Naled	12.1	LCS	P	0 - 30
LFB	Norflurazon	11.4	LCS	P	0 - 30
LFB	Oxadiazon	11.2	LCS	P	0 - 30
LFB	Oxyfluorfen	0.167	LCS	P	0 - 30
LFB	Parathion Ethyl	1.44	LCS	P	0 - 30
LFB	Parathion Methyl	3.66	LCS	P	0 - 30
LFB	Pendimethalin	2.39	LCS	P	0 - 30
LFB	Phorate	1.38	LCS	P	0 - 30
LFB	Prodiamine	9.34	LCS	P	0 - 30
LFB	Prometon	6.14	LCS	P	0 - 30
LFB	Prometryn	6.69	LCS	P	0 - 30
LFB	Pronamide	1.28	LCS	P	0 - 30
LFB	Propiconazole	16.8	LCS	P	0 - 30
LFB	Pyriproxyfen	3.97	LCS	P	0 - 30
LFB	Simazine	0.195	LCS	P	0 - 30
LFB	Sulfentrazone	10.9	LCS	P	0 - 30
LFB	Tebuconazole	38.7	LCS	F	0 - 30
LFB	Terbufos	2.35	LCS	P	0 - 30
LFB	Terbutylazine	13.0	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P399865

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2255020	Acesulfame K	2.82	Spike	P	0 - 30
2255020	AMPA	2.28	Spike	P	0 - 30
2255020	Endothall	16.3	Spike	P	0 - 30
2255020	Glufosinate	1.33	Spike	P	0 - 30
2255020	Glyphosate	4.62	Spike	P	0 - 30
2255020	Sucralose	2.76	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P399973

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2255827	2,4-D	7.19	Spike	P	0 - 30
2255827	2,4,5-T	17.4	Spike	P	0 - 30
2255827	Acetaminophen	8.47	Spike	P	0 - 30
2255827	Acetamiprid	28.4	Spike	P	0 - 30
2255827	Afidopyropen	164	Spike	F	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
 Batch ID: P399973

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2255827	Bentazon	8.00	Spike	P	0 - 30
2255827	Benzovindiflupyr	13.5	Spike	P	0 - 30
2255827	Carbamazepine	7.89	Spike	P	0 - 30
2255827	Clothianidin	3.92	Spike	P	0 - 30
2255827	Dinotefuran	19.4	Spike	P	0 - 30
2255827	Diuron	8.07	Spike	P	0 - 30
2255827	Fenuron	3.65	Spike	P	0 - 30
2255827	Fluridone	11.8	Spike	P	0 - 30
2255827	Hydrocodone	24.1	Spike	P	0 - 30
2255827	Ibuprofen	10.3	Spike	P	0 - 30
2255827	Imazapyr	11.2	Spike	P	0 - 30
2255827	Imidacloprid	8.80	Spike	P	0 - 30
2255827	Linuron	15.8	Spike	P	0 - 30
2255827	Mandestrobin	19.3	Spike	P	0 - 30
2255827	MCPP	10.4	Spike	P	0 - 30
2255827	Naproxen	18.8	Spike	P	0 - 30
2255827	Primidone	4.52	Spike	P	0 - 30
2255827	Pyraclostrobin	7.11	Spike	P	0 - 30
2255827	Thiamethoxam	8.77	Spike	P	0 - 30
2255827	Tolfenpyrad	11.9	Spike	P	0 - 30
2255827	Triclopyr	11.8	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
 Batch ID: P399956

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2255866	Color (true)	0.361	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
 Batch ID: P400371

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2255491	Total Alkalinity	0.858	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
 Batch ID: P400344

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2256032	TDS	0.612	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
 Batch ID: P400374

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2255491	Fluoride	0.919	Spike	P	0 - 2.1

Quality Assurance Report

Precision

Reference Method: SM 5310 B-2011
Batch ID: P400361

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2255871	Organic Carbon	0.441	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2255966

Field Sample ID: G4NW0491

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	97.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	80.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	94.4	P	30 - 160
EPA 8321B	Diuron-d6	78.3	P	30 - 160
EPA 8321B	Endothall-d6	86.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	80.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	74.6	P	30 - 160
EPA 8321B	Primidone-d5	81.2	P	30 - 160
EPA 8321B	Sucralose-d6	100	P	30 - 160

Lab Sample ID: 2255967

Field Sample ID: G4NW0347

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	92.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	77.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	92.4	P	30 - 160
EPA 8321B	Diuron-d6	79.2	P	30 - 160
EPA 8321B	Endothall-d6	84.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	86.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	65.6	P	30 - 160
EPA 8321B	Primidone-d5	76.0	P	30 - 160
EPA 8321B	Sucralose-d6	88.4	P	30 - 160

Lab Sample ID: 2255978

Field Sample ID: G4NW0491

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	70.9	P	20 - 200
EPA 8270E	Simazine-d10	116	P	73 - 135
EPA 8270E	Terbufos-d10	96.0	P	58 - 130

Lab Sample ID: 2255979

Field Sample ID: G4NW0347

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	64.9	P	20 - 200
EPA 8270E	Simazine-d10	113	P	73 - 135
EPA 8270E	Terbufos-d10	90.9	P	58 - 130

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A106176

Included Lab Sample IDs: 2255946, 2255947

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.4	98.1	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A106177

Included Lab Sample IDs: 2255942, 2255943

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A106178

Included Lab Sample IDs: 2255942, 2255943

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

Reference Method: EPA 8321B

Run ID: A106190

Included Lab Sample IDs: 2255966, 2255967

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	82.6	85.6	P/P	60 - 160
Glufosinate	89.7	88.5	P/P	60 - 160
Glyphosate	93.6	89.6	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A106192

Included Lab Sample IDs: 2255966, 2255967

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	76.7	76.3	P/P	60 - 160
Endothall	82.8	66.2	P/P	60 - 160
Sucralose	107	105	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A106207

Included Lab Sample IDs: 2255944, 2255945

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	100	P/P	90 - 110
NO2NO3-N	99.5	100	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A106231

Included Lab Sample IDs: 2255974, 2255975

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	97.2	96.3	P/P	90 - 110
Calcium	101	99.5	P/P	90 - 110
Iron	101	99.5	P/P	90 - 110
Magnesium	99.6	98.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A106231

Included Lab Sample IDs: 2255974, 2255975

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Manganese	101	100	P/P	90 - 110
Potassium	98.9	97.3	P/P	90 - 110
Sodium	99.9	98.0	P/P	90 - 110
Zinc	97.2	97.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A106289

Included Lab Sample IDs: 2255944, 2255945

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	95.7	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A106322

Included Lab Sample IDs: 2255966, 2255967

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	94.3	95.4	P/P	50 - 150
2,4,5-T	121	97.3	P/P	50 - 150
Acetaminophen	102	98.4	P/P	60 - 160
Acetamiprid	98.7	105	P/P	50 - 150
Afidopyropen	113	108	P/P	50 - 150
Bentazon	87.8	88.1	P/P	50 - 160
Benzovindiflupyr	100	93.7	P/P	50 - 160
Carbamazepine	101	99.6	P/P	60 - 150
Clothianidin	100	112	P/P	60 - 150
Dinotefuran	118	103	P/P	50 - 150
Diuron	111	100	P/P	60 - 160
Fenuron	98.4	96.0	P/P	60 - 150
Fluridone	103	107	P/P	60 - 160
Hydrocodone	103	89.7	P/P	60 - 150
Ibuprofen	97.8	86.0	P/P	50 - 160
Imazapyr	119	129	P/P	50 - 160
Imidacloprid	93.8	93.7	P/P	60 - 150
Linuron	93.1	68.5	P/P	60 - 150
Mandestrobin	117	122	P/P	50 - 150
MCPP	109	99.8	P/P	50 - 150
Naproxen	110	134	P/P	50 - 160
Primidone	94.8	98.9	P/P	60 - 150
Pyraclostrobin	97.8	96.2	P/P	60 - 150
Thiamethoxam	102	93.3	P/P	50 - 150
Tolfenpyrad	94.5	99.5	P/P	60 - 150
Triclopyr	113	97.6	P/P	50 - 150

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A106346

Included Lab Sample IDs: 2255944, 2255945

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.6	97.9	P/P	90 - 110
Ammonia-N	99.7	98.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A106356

Included Lab Sample IDs: 2255974, 2255975

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.5	96.5	P/P	90 - 110
Antimony	97.9	96.8	P/P	90 - 110
Arsenic	98.0	97.8	P/P	90 - 110
Beryllium	92.2	93.3	P/P	90 - 110
Boron	101	97.2	P/P	90 - 110
Cadmium	96.3	95.4	P/P	90 - 110
Chromium	94.7	95.4	P/P	90 - 110
Copper	96.6	98.1	P/P	90 - 110
Selenium	97.7	94.9	P/P	90 - 110
Silver	97.5	96.6	P/P	90 - 110
Thallium	94.0	92.1	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A106360

Included Lab Sample IDs: 2255944, 2255945

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.5	97.1	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A106363

Included Lab Sample IDs: 2255942, 2255943

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

Reference Method: SM 4500 F-C-2011

Run ID: A106363

Included Lab Sample IDs: 2255942, 2255943

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A106366

Included Lab Sample IDs: 2255944, 2255945

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.0	99.2	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A106377

Included Lab Sample IDs: 2255974, 2255975

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Lead	107	105	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A106423

Included Lab Sample IDs: 2255942, 2255943

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	100	P/P	90 - 110
Sulfate	100	99.6	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A106446

Included Lab Sample IDs: 2255974, 2255975

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

Reference Method: EPA 8270E

Run ID: A106448

Included Lab Sample IDs: 2255978, 2255979

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	103		P	80 - 120
Alachlor	102		P	80 - 120
Ametryn	99.2		P	80 - 120
Atrazine	98.1		P	80 - 120
Atrazine Desethyl	106		P	80 - 120
Azinphos Methyl	94.7		P	80 - 120
Azoxystrobin	101		P	80 - 120
Bromacil	103		P	80 - 120
Butylate	106		P	80 - 120
Caffeine	86.0		P	80 - 120
Carbophenothion	102		P	80 - 120
Carfentrazone Ethyl	100		P	80 - 120
Chlorpyrifos Ethyl	102		P	80 - 120
Chlorpyrifos Methyl	99.2		P	80 - 120
Cyanazine	107		P	80 - 120
Demeton	101		P	80 - 120
Diazinon	96.8		P	80 - 120
Difenoconazole	88.5		P	80 - 120
Dimethenamid	102		P	80 - 120
Disulfoton	97.1		P	80 - 120
Dithiopyr	101		P	80 - 120
EPTC	103		P	80 - 120
Ethion	98.8		P	80 - 120
Ethoprop	102		P	80 - 120
Fenamiphos	96.6		P	80 - 120
Fenbuconazole	101		P	80 - 120
Fipronil	100		P	80 - 120
Fipronil Desulfinyl	102		P	80 - 120
Fipronil Sulfide	104		P	80 - 120
Fipronil Sulfone	98.3		P	80 - 120
Fluazifop-P-butyl	105		P	80 - 120
Fludioxonil	101		P	80 - 120
Flumioxazin	93.2		P	80 - 120
Flutolanil	104		P	80 - 120
Fluxapyroxad	102		P	80 - 120
Fonofos	101		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A106448

Included Lab Sample IDs: 2255978, 2255979

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Hexazinone	101		P	80 - 120
Imazalil	106		P	80 - 120
Iprodione	115		P	80 - 120
Malathion	91.7		P	80 - 120
Metalaxyl	106		P	80 - 120
Metolachlor	102		P	80 - 120
Metribuzin	102		P	80 - 120
Mevinphos	99.7		P	80 - 120
Molinate	102		P	80 - 120
Myclobutanil	101		P	80 - 120
Naled	103		P	80 - 120
Norflurazon	102		P	80 - 120
Oxadiazon	106		P	80 - 120
Oxyfluorfen	97.7		P	80 - 120
Parathion Ethyl	102		P	80 - 120
Parathion Methyl	101		P	80 - 120
Pendimethalin	109		P	80 - 120
Phorate	101		P	80 - 120
Prodiamine	93.9		P	80 - 120
Prometon	99.6		P	80 - 120
Prometryn	108		P	80 - 120
Pronamide	96.3		P	80 - 120
Propiconazole	102		P	80 - 120
Pyriproxyfen	102		P	80 - 120
Simazine	106		P	80 - 120
Sulfentrazone	94.2		P	80 - 120
Tebuconazole	101		P	80 - 120
Terbufos	103		P	80 - 120
Terbutylazine	103		P	80 - 120

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							0.438	
EPA 200.7 Rev. 4.4	Barium	102		101	103	104			0.818
	Calcium	109		104	111	111			0.0361
	Iron	110		108	112	112			0.0727
	Magnesium	111		107	113	112			0.296
	Manganese	104		102	105	105			0.738
	Potassium	103		107	109	108			1.28
	Sodium	103		100	110	107			2.36
	Zinc	98.5		97.8	98.4	99.6			1.20
EPA 200.8 Rev. 5.4	Aluminum	102		102	102	104			0.0119
	Antimony	102		102	101	102			1.45
	Arsenic	105		104	102	103			1.74
	Beryllium	104		103	104	102			0.853
	Boron	106		105	106	109			0.622
	Cadmium	101		99.0	98.8	100			0.112
	Chromium	99.9		99.8	98.8	99.5			1.00
	Copper	101		103	101	104			1.55
	Lead	114		116	115	118			1.23
	Nickel	108		106	108	107			1.87
	Selenium	103		102	101	102			0.706
	Silver	99.6		101	100	100			0.321
	Thallium	103		105	104	105			1.00
EPA 300.0 Rev. 2.1	Chloride	102		96.3	98.6			0.439	
	Sulfate	96.9		97.6	95.8			0.675	
EPA 350.1 Rev. 2.0	Ammonia-N	98.8		97.4	96.2				0.990
	Ammonia-N	98.6		96.0	95.8				0.192
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101		104	102				1.12
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0		99.0	98.5				0.506
	NO2NO3-N	99.0		96.0					0.191
EPA 365.1 Rev. 2.0	Total-P	104		103	102				1.05
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100		97.8	97.3				0.513
EPA 8270E	Acetochlor	112	100	106	113	11.4			6.40
	Alachlor	108	95.5	90.7	103	12.6			13.0
	Ametryn	94.7	97.1	92.9	86.5	2.42			7.11
	Atrazine	99.8	100			0.128			5.98
	Atrazine Desethyl	72.3	69.9	80.5	85.1	3.36			5.55
	Azinphos Methyl	111	127	129	122	13.7			5.80
	Azoxystrobin	97.1	102	107	123	5.38			14.3
	Bromacil	91.6	86.9	82.3	94.6	5.23			13.8
	Butylate	59.9	60.0	71.4	95.5	0.124			28.9
	Caffeine	81.7	78.3	103	104	4.29			0.609
	Carbophenothion	103	101	94.6	98.7	1.88			4.23
	Carfentrazone Ethyl	120	110	101	104	8.87			2.37
	Chlorpyrifos Ethyl	90.4	86.6	85.7	92.4	4.35			7.52
	Chlorpyrifos Methyl	87.8	89.0	87.6	90.9	1.33			3.66
	Cyanazine	118	109	97.9	110	7.70			11.6
	Demeton	30.3	29.9	46.6	48.6	1.47			4.32
	Diazinon	100	97.8	99.1	109	2.54			9.75
	Difenoconazole	126	151	148	137	17.6			7.65
	Dimethenamid	84.9	77.7	78.1	79.8	8.82			2.14
	Disulfoton	74.9	74.0	91.9	69.4	1.21			27.9
	Dithiopyr	96.5	85.1	84.4	96.9	12.5			13.7
	EPTC	39.2	40.9	44.3	52.8	4.26			17.5
	Ethion	90.6	80.9	63.7	44.2	11.3			36.0

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Ethoprop	77.0	83.1	87.1	97.5	7.51	11.3
	Fenamiphos	97.6	95.4	85.6	80.8	2.32	5.74
	Fenbuconazole	114	106	101	107	7.51	6.02
	Fipronil	110	97.9	95.2	96.4	11.3	1.21
	Fipronil Desulfinyl	117	101	95.1	100	15.5	5.09
	Fipronil Sulfide	92.1	85.1	76.0	73.8	7.97	2.98
	Fipronil Sulfone	89.4	81.1	72.8	85.0	9.84	14.0
	Fluazifop-P-butyl	103	97.4	90.7	97.8	5.89	7.60
	Fludioxonil	108	95.8	90.9	92.8	12.2	2.07
	Flumioxazin	137	164	173	172	18.4	0.614
	Flutolanil	102	90.3	80.6	85.9	12.6	6.30
	Fluxapyroxad	99.3	86.1	86.2	80.0	14.3	7.13
	Fonofos	77.7	81.6	81.4	92.2	4.88	12.5
	Hexazinone	94.4	89.1			5.77	11.3
	Imazalil	102	95.2	114	95.1	6.82	18.0
	Iprodione	111	101	95.3	96.5	10.1	1.27
	Malathion	105	105	96.5	103	0.621	6.59
	Metalaxyl	105	93.6	87.8	96.1	11.3	9.00
	Metolachlor	106	96.2	92.6	102	9.20	8.99
	Metribuzin	98.6	98.9	96.8	119	0.245	20.6
	Mevinphos	63.0	69.8	76.6	87.6	10.2	13.3
	Molinate	49.2	56.4	61.2	72.5	13.6	16.9
	Myclobutanil	98.4	92.4	86.6	88.3	6.26	1.95
	Naled	38.8	43.8	50.8	58.4	12.1	13.8
	Norflurazon	97.9	87.3	86.0	88.9	11.4	3.32
	Oxadiazon	97.9	87.5	85.0	86.2	11.2	1.44
	Oxyfluorfen	112	112	113	106	0.167	6.65
	Parathion Ethyl	88.5	89.8	87.5	96.7	1.44	9.93
	Parathion Methyl	99.8	104	101	115	3.66	12.8
	Pendimethalin	86.8	89.0	93.3	102	2.39	9.34
	Phorate	103	105	145	161	1.38	10.4
	Prodiamine	44.1	48.4	58.1	63.2	9.34	8.44
	Prometon	91.9	86.5	84.3	96.3	6.14	13.2
	Prometryn	98.7	92.3	85.0	89.4	6.69	5.11
	Pronamide	97.1	95.9	100	108	1.28	7.47
	Propiconazole	104	88.2	86.1	92.5	16.8	7.17
	Pyriproxyfen	97.3	93.5	88.0	116	3.97	27.1
	Simazine	86.7	86.5	92.4	109	0.195	11.8
	Sulfentrazone	85.9	77.1	79.8	83.9	10.9	5.04
	Tebuconazole	94.3	63.7	66.0	53.5	38.7	21.0
	Terbufos	91.3	93.5	98.5	110	2.35	11.1
	Terbuthylazine	102	89.6	70.6	79.5	13.0	9.44
EPA 8321B	2,4-D	104					7.19
	2,4,5-T	98.0		104	87.5		17.4
	Acesulfame K	80.5		84.0	86.4		2.82
	Acetaminophen	78.3		97.1	89.2		8.47
	Acetamiprid	75.5		77.8	58.4		28.4
	Afidopyropen	71.5		67.5	6.62		164
	AMPA	99.4		95.1	97.3		2.28
	Bentazon	76.8		64.4	59.5		8.00
	Benzovindiflupyr	84.2		89.4	78.1		13.5
	Carbamazepine	88.8		97.2	89.8		7.89
	Clothianidin	81.4		95.7	99.6		3.92
	Dinotefuran	88.5		114	93.7		19.4

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8321B	Diuron	79.9	77.8	71.8			8.07
	Endothall	71.4	70.2	82.7			16.3
	Fenuron	89.1	88.0	84.8			3.65
	Fluridone	90.7	91.5	81.3			11.8
	Glufosinate	101	103	105			1.33
	Glyphosate	103	106	111			4.62
	Hydrocodone	78.0	111	86.8			24.1
	Ibuprofen	77.0	91.3	82.4			10.3
	Imazapyr	110	158	140			11.2
	Imidacloprid	81.6	127	116			8.80
	Linuron	72.2	72.1	61.6			15.8
	Mandestrobin	101	107	88.5			19.3
	MCPP	101	104	93.8			10.4
	Naproxen	101	80.3	97.0			18.8
	Primidone	90.5	103	98.0			4.52
	Pyraclostrobin	78.0	80.6	75.0			7.11
	Sucralose	102	99.7	103			2.76
	Thiamethoxam	90.2	128	117			8.77
	Tolfenpyrad	52.3	54.2	48.1			11.9
	Triclopyr	93.3	105	93.6			11.8
SM 2120 B-2011	Color (true)	99.7				0.361	
SM 2320 B-2011	Total Alkalinity	103				0.858	
SM 2540 C-2011	TDS					0.612	
SM 4500 F-C-2011	Fluoride	98.0	98.2	97.2			0.919
SM 5310 B-2011	Organic Carbon	96.0	96.4	97.0			0.441

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2255942, 2255943
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2255974, 2255975
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2255974, 2255975
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2255942, 2255943
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2255942, 2255943
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2255944, 2255945
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2255944, 2255945
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2255944, 2255945
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2255944, 2255945
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2255946, 2255947
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2255978, 2255979
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2255966, 2255967
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2255942, 2255943
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2255942, 2255943
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2255974, 2255975
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2255942, 2255943
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2255942, 2255943
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2255942, 2255943
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2255944, 2255945

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	06/18/2021			06/18/2021 15:08	Sarah A Nixon	2255942, 2255943
EPA 200.7 Rev. 4.4	06/18/2021	06/21/2021 13:15	Elliott D. Healy	06/22/2021 17:37	Josef B Mick	2255974
	06/18/2021	06/21/2021 13:15	Elliott D. Healy	06/22/2021 17:43	Josef B Mick	2255975
EPA 200.8 Rev. 5.4	06/18/2021	06/21/2021 13:15	Elliott D. Healy	06/29/2021 17:43	Alexander Thompson	2255974
	06/18/2021	06/21/2021 13:15	Elliott D. Healy	06/29/2021 17:53	Alexander Thompson	2255975
	06/18/2021	06/21/2021 13:15	Elliott D. Healy	06/30/2021 15:23	Alexander Thompson	2255974
	06/18/2021	06/21/2021 13:15	Elliott D. Healy	06/30/2021 15:30	Alexander Thompson	2255975
	06/18/2021	07/01/2021 13:10	Elliott D. Healy	07/03/2021 00:58	Alexander Thompson	2255974
	06/18/2021	07/01/2021 13:10	Elliott D. Healy	07/03/2021 01:04	Alexander Thompson	2255975
EPA 300.0 Rev. 2.1	06/18/2021			07/01/2021 20:44	Lipi Saha	2255942
	06/18/2021			07/01/2021 20:56	Lipi Saha	2255943
EPA 350.1 Rev. 2.0	06/18/2021			06/29/2021 12:51	Roberta Tatti	2255944
	06/18/2021			06/29/2021 13:02	Roberta Tatti	2255945
EPA 351.2 Rev. 2.0	06/18/2021	06/22/2021 12:54	Benjamin T. Nordmann	06/24/2021 11:44	Letuzia M De Oliveira	2255944
	06/18/2021	06/22/2021 12:54	Benjamin T. Nordmann	06/24/2021 11:46	Letuzia M De Oliveira	2255945
EPA 353.2 Rev. 2.0	06/18/2021			06/22/2021 09:36	Beverly Y. Sanders	2255944
	06/18/2021			06/22/2021 09:43	Beverly Y. Sanders	2255945
EPA 365.1 Rev. 2.0	06/18/2021	06/28/2021 17:29	Madeline Gruver	06/30/2021 10:40	Shengyu Ding	2255944
	06/18/2021	06/28/2021 17:29	Madeline Gruver	06/30/2021 10:41	Shengyu Ding	2255945
EPA 365.1 Rev. 2.0 dissolved	06/18/2021			06/18/2021 15:37	Ping Hua	2255946
	06/18/2021			06/18/2021 15:38	Ping Hua	2255947
EPA 8270E	06/18/2021	06/21/2021 08:00	Fe-Val Siddell	06/22/2021 18:39	Vandana T. Nagar	2255978
	06/18/2021	06/21/2021 08:00	Fe-Val Siddell	06/22/2021 19:04	Vandana T. Nagar	2255979
EPA 8321B	06/18/2021	06/18/2021 11:00	Juyoung Kim	06/18/2021 18:04	Juyoung Kim	2255966
	06/18/2021	06/18/2021 11:00	Juyoung Kim	06/18/2021 18:17	Juyoung Kim	2255967
	06/18/2021	06/18/2021 11:00	Juyoung Kim	06/19/2021 01:00	Juyoung Kim	2255966
	06/18/2021	06/18/2021 11:00	Juyoung Kim	06/19/2021 01:11	Juyoung Kim	2255967
	06/18/2021	06/23/2021 09:00	Hoor Shaik	06/25/2021 20:17	Juyoung Kim	2255966
	06/18/2021	06/23/2021 09:00	Hoor Shaik	06/25/2021 20:52	Juyoung Kim	2255967
SM 2120 B-2011	06/18/2021			06/18/2021 15:43	Sarah A Nixon	2255942
	06/18/2021			06/18/2021 15:44	Sarah A Nixon	2255943
SM 2320 B-2011	06/18/2021			06/29/2021 18:39	Dale L. Simmons	2255942
	06/18/2021			06/29/2021 18:48	Dale L. Simmons	2255943
SM 2340B	06/18/2021			06/22/2021 17:37	Josef B Mick	2255974
	06/18/2021			06/22/2021 17:43	Josef B Mick	2255975
SM 2540 C-2011	06/18/2021			06/22/2021 14:06	Yijie Li	2255942, 2255943
SM 2540 D-2011	06/18/2021			06/22/2021 14:15	Yijie Li	2255942, 2255943
SM 4500 F-C-2011	06/18/2021			06/29/2021 18:39	Dale L. Simmons	2255942
	06/18/2021			06/29/2021 18:48	Dale L. Simmons	2255943
SM 5310 B-2011	06/18/2021			06/29/2021 05:48	Madeline Gruver	2255944

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-2011	06/18/2021			06/29/2021 06:03	Madeline Gruver	2255945