Chemical Analysis Report

NE-DIST-2021-06-25-01

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

Event Description: **Moncrief SCI**
Request ID: **RQ-2021-05-24-10**
Customer: **NE-DIST**
Project ID: **SMP**

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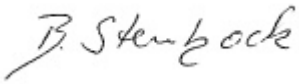
Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator Date Certified: 20-JUL-2021 16:55



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: Moncrief CR N of 33rd St Brid **Collection Date/Time: 06/24/2021 09:15**

Field ID: 20030316 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2257099	EPA 180.1 Rev. 2.0	Turbidity	4.1	A	NTU	P400253	
	EPA 300.0 Rev. 2.1	Chloride	5.3		mg Cl/L	P400553	
		Sulfate	14		mg SO4/L	P400558	
	SM 2120 B-2011	Color (true)	33	A	PCU	P400249	
	SM 2320 B-2011	Total Alkalinity	69		mg CaCO3/L	P400616	
	SM 2540 C-2011	TDS	113		mg/L	P400605	
	SM 2540 D-2011	TSS	4	I	mg/L	P400608	
	SM 4500 F-C-2011	Fluoride	0.099	I	mg F/L	P400620	
2257100	EPA 350.1 Rev. 2.0	Ammonia-N	0.19		mg N/L	P400738	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.92		mg N/L	P400685	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.10		mg N/L	P400264	
	EPA 365.1 Rev. 2.0	Total-P	0.095		mg P/L	P400339	
	SM 5310 B-2011	Organic Carbon	5.1		mg C/L	P400534	
2257101	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.039		mg P/L	P400240	
2257104	EPA 8321B	2,4-D	0.041		ug/L	P400315	
		Acesulfame K	0.10	U	ug/L	P400090	RPD
		2,4,5-T	0.0040	U	ug/L	P400315	
		AMPA	0.67		ug/L	P400090	
		Acetaminophen	0.056		ug/L	P400315	
		Acetamiprid	0.0025	I	ug/L	P400315	
		Endothall	0.25	U	ug/L	P400090	
		Glufosinate	0.10	U	ug/L	P400090	
		Glyphosate	1.2		ug/L	P400090	
		Afidopyropen	0.0020	U	ug/L	P400315	
		Bentazon	0.0025	I	ug/L	P400315	
		Sucralose	0.070		ug/L	P400090	
		Benzovindiflupyr	0.0020	U	ug/L	P400315	
		Carbamazepine	8.0E-04	U	ug/L	P400315	
		Clothianidin	0.0076	I	ug/L	P400315	
		Dinotefuran	0.0088		ug/L	P400315	
		Diuron	0.023		ug/L	P400315	
		Fenuron	0.016	U	ug/L	P400315	
		Fluridone	0.0011	I	ug/L	P400315	
		Imazapyr	0.23		ug/L	P400315	MS
		Hydrocodone	0.0020	U	ug/L	P400315	
		Ibuprofen	0.020	U	ug/L	P400315	
		Imidacloprid	0.025		ug/L	P400315	
		Linuron	0.0040	U	ug/L	P400315	
		Mandestrobin	0.0020	U	ug/L	P400315	
		MCPP	0.0043	I	ug/L	P400315	
		Naproxen	0.0080	U	ug/L	P400315	
		Primidone	0.0040	U	ug/L	P400315	
		Pyraclostrobin	0.0020	U	ug/L	P400315	

Field ID: 20030316 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2257104	EPA 8321B	Thiamethoxam	0.0040	I	ug/L	P400315	
		Tolfenpyrad	0.0020	U	ug/L	P400315	
		Triclopyr	0.0040	U	ug/L	P400315	
2257105	EPA 200.7 Rev. 4.4	Barium	26.5		ug/L	P400275	
		Calcium	28.9		mg/L	P400275	
		Iron	970		ug/L	P400275	
		Magnesium	2.49		mg/L	P400275	
		Manganese	34.0		ug/L	P400275	
		Potassium	1.6		mg/L	P400275	
		Sodium	4.8		mg/L	P400275	
		Zinc	13	I	ug/L	P400275	
	EPA 200.8 Rev. 5.4	Aluminum	82		ug/L	P400275	
		Antimony	0.29		ug/L	P400275	
		Arsenic	1.95		ug/L	P400275	
		Beryllium	0.013	I	ug/L	P400275	
		Boron**	90.7		ug/L	P400275	
		Cadmium	0.020	U	ug/L	P400275	
		Chromium	0.40	U	ug/L	P400275	
		Copper	1.63		ug/L	P400275	
		Lead	0.89		ug/L	P400275	
		Nickel	0.63	I	ug/L	P400275	
		Selenium	0.20	U	ug/L	P400275	
		Silver	0.010	U	ug/L	P400275	
		Thallium	0.10	U	ug/L	P400275	
	SM 2340B	Hardness	82.3		mg/L	P400275	
2257106	EPA 8270E	Acetochlor	0.25	I	ng/L	P400222	
		Alachlor	0.25	U	ng/L	P400222	
		Ametryn	0.59	U	ng/L	P400222	
		Atrazine	140		ng/L	P400222	
		Atrazine Desethyl	9.6		ng/L	P400222	
		Azinphos Methyl	2.0	U	ng/L	P400222	
		Azoxystrobin**	1.1	I	ng/L	P400222	
		Bromacil	19		ng/L	P400222	
		Butylate	0.39	U	ng/L	P400222	
		Caffeine**	210		ng/L	P400222	
		Carbophenothion	0.49	U	ng/L	P400222	
		Carfentrazone Ethyl**	0.098	U	ng/L	P400222	
		Chlorpyrifos Ethyl	0.25	UJ	ng/L	P400222	MS, RPD
		Chlorpyrifos Methyl	0.049	U	ng/L	P400222	
		Cyanazine	3.2	U	ng/L	P400222	
		Demeton	1.5	UJ	ng/L	P400222	LCS
		Diazinon	0.12	U	ng/L	P400222	
		Difenoconazole**	0.59	U	ng/L	P400222	
		Dimethenamid**	1.0		ng/L	P400222	
		Disulfoton	0.49	U	ng/L	P400222	

Field ID: 20030316 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2257106	EPA 8270E	Dithiopyr**	0.45	I	ng/L	P400222	
		EPTC	1.2	U	ng/L	P400222	
		Ethion	0.15	U	ng/L	P400222	
		Ethoprop	0.098	U	ng/L	P400222	
		Fenamiphos	0.49	U	ng/L	P400222	
		Fenbuconazole**	0.12	U	ng/L	P400222	
		Fipronil	7.8		ng/L	P400222	
		Fipronil Desulfinyl**	3.2		ng/L	P400222	
		Fipronil Sulfide	2.7		ng/L	P400222	
		Fipronil Sulfone	5.7		ng/L	P400222	
		Fluazifop-P-butyl**	0.098	U	ng/L	P400222	
		Fludioxonil**	0.12	U	ng/L	P400222	
		Flumioxazin**	4.0	I	ng/L	P400222	
		Flutolanil**	0.098	U	ng/L	P400222	
		Fluxapyroxad**	0.098	U	ng/L	P400222	
		Fonofos	0.20	U	ng/L	P400222	
		Hexazinone	7.1		ng/L	P400222	
		Imazalil**	0.74	U	ng/L	P400222	
		Iprodione**	0.59	U	ng/L	P400222	
		Malathion	0.34	U	ng/L	P400222	
		Metalaxyl	0.74	U	ng/L	P400222	
		Metolachlor	1.8		ng/L	P400222	
		Metribuzin	3.2	U	ng/L	P400222	
		Mevinphos	1.0	U	ng/L	P400222	
		Molinate	0.29	U	ng/L	P400222	
		Myclobutanil**	0.25	U	ng/L	P400222	
		Naled**	1.5	U	ng/L	P400222	
		Norflurazon	0.49	U	ng/L	P400222	
		Oxadiazon	1.2		ng/L	P400222	
		Oxyfluorfen**	0.15	U	ng/L	P400222	
		Parathion Ethyl	0.25	U	ng/L	P400222	
		Parathion Methyl	0.54	U	ng/L	P400222	
		Pendimethalin	0.98	U	ng/L	P400222	
		Phorate	0.52	U	ng/L	P400222	
		Prodiamine**	0.41	I	ng/L	P400222	
		Prometon	29		ng/L	P400222	
		Prometryn	0.20	U	ng/L	P400222	
		Pronamide**	0.15	U	ng/L	P400222	
		Propiconazole**	5.1		ng/L	P400222	
		Pyriproxyfen**	0.12	U	ng/L	P400222	
		Simazine	3.5		ng/L	P400222	
		Sulfentrazone**	2.2		ng/L	P400222	
		Tebuconazole**	11		ng/L	P400222	
		Terbufos	0.098	U	ng/L	P400222	
		Terbuthylazine	0.42	U	ng/L	P400222	

Field ID: 20030316 Matrix: W-SURF-FRH

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

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
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: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.
EPA 8270E: MS accuracy for some parameters 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: P400253

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P400275

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: P400275

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: P400553

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P400558

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P400738

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P400685

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P400264

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P400339

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P400240

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

Reference Method: EPA 8270E
Batch ID: P400222

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azoxystrobin	0.50	U	ng/L
Azoxystrobin	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Butylate	0.40	U	ng/L
Caffeine	7.5	U	ng/L
Caffeine	7.5	U	ng/L
Carbophenothion	0.50	U	ng/L
Carbophenothion	0.50	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P400222

Component	Result	Code	Units
Cyanazine	3.2	U	ng/L
Cyanazine	3.2	U	ng/L
Demeton	1.5	U	ng/L
Demeton	1.5	U	ng/L
Diazinon	0.12	U	ng/L
Diazinon	0.12	U	ng/L
Difenoconazole	0.60	U	ng/L
Difenoconazole	0.60	U	ng/L
Dimethenamid	0.10	U	ng/L
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.18	U	ng/L
Dithiopyr	0.18	U	ng/L
EPTC	1.2	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fludioxonil	0.12	U	ng/L
Fludioxonil	0.12	U	ng/L
Flumioxazin	1.8	U	ng/L
Flumioxazin	1.8	U	ng/L
Flutolanil	0.10	U	ng/L
Flutolanil	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fonofos	0.20	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Hexazinone	0.50	U	ng/L
Imazalil	0.75	U	ng/L
Imazalil	0.75	U	ng/L
Iprodione	0.60	U	ng/L
Iprodione	0.60	U	ng/L
Malathion	0.35	U	ng/L
Malathion	0.35	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P400222

Component	Result	Code	Units
Metalaxyl	0.75	U	ng/L
Metalaxyl	0.75	U	ng/L
Metolachlor	0.35	U	ng/L
Metolachlor	0.35	U	ng/L
Metribuzin	3.2	U	ng/L
Metribuzin	3.2	U	ng/L
Mevinphos	1.0	U	ng/L
Mevinphos	1.0	U	ng/L
Molinate	0.30	U	ng/L
Molinate	0.30	U	ng/L
Myclobutanil	0.25	U	ng/L
Myclobutanil	0.25	U	ng/L
Naled	1.5	U	ng/L
Naled	1.5	U	ng/L
Norflurazon	0.50	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.52	U	ng/L
Phorate	0.52	U	ng/L
Prodiamine	0.18	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Prometryn	0.20	U	ng/L
Pronamide	0.15	U	ng/L
Pronamide	0.15	U	ng/L
Propiconazole	0.50	U	ng/L
Propiconazole	0.50	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Simazine	0.50	U	ng/L
Simazine	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L
Terbuthylazine	0.42	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P400090

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: P400315

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B-2011
Batch ID: P400249

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P400616

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

Quality Assurance Report
Method Blank Results

Reference Method: SM 2540 C-2011
Batch ID: P400605

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P400608

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P400620

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P400534

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: P400275

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	100		P	85 - 115
Calcium	102		P	85 - 115
Iron	107		P	85 - 115
Magnesium	101		P	85 - 115
Manganese	99.2		P	85 - 115
Potassium	105		P	85 - 115
Sodium	101		P	85 - 115
Zinc	95.3		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P400275

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	111		P	80 - 120
Antimony	109		P	80 - 120
Arsenic	108		P	80 - 120
Beryllium	104		P	80 - 120
Boron	114		P	80 - 120
Cadmium	104		P	80 - 120
Chromium	104		P	80 - 120
Copper	107		P	80 - 120
Lead	100		P	80 - 120
Nickel	107		P	80 - 120
Selenium	108		P	80 - 120
Silver	106		P	80 - 120
Thallium	109		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P400553

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P400558

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P400738

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P400685

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P400264

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P400339

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P400240

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

Reference Method: EPA 8270E
Batch ID: P400222

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	92.8	102	P/P	70 - 121
Alachlor	93.5	106	P/P	70 - 119
Ametryn	101	109	P/P	61 - 135
Atrazine	94.9	103	P/P	76 - 123
Atrazine Desethyl	60.7	76.3	P/P	35 - 140
Azinphos Methyl	97.2	109	P/P	57 - 163
Azoxystrobin	96.9	104	P/P	43 - 231
Bromacil	81.3	93.0	P/P	42 - 123
Butylate	46.6	56.8	P/P	34 - 92.0
Caffeine	85.0	83.8	P/P	70 - 130
Carbophenothion	100	108	P/P	61 - 121
Carfentrazone Ethyl	95.2	108	P/P	62 - 139
Chlorpyrifos Ethyl	84.9	98.8	P/P	67 - 121
Chlorpyrifos Methyl	92.7	101	P/P	67 - 120
Cyanazine	116	111	P/P	20 - 226
Demeton	34.6	38.1	F/P	35 - 125
Diazinon	90.5	103	P/P	70 - 122
Difenoconazole	137	160	P/P	56 - 186
Dimethenamid	74.7	83.8	P/P	67 - 119
Disulfoton	78.4	85.2	P/P	47 - 120
Dithiopyr	87.6	101	P/P	67 - 118
EPTC	47.9	55.4	P/P	33 - 90.0
Ethion	81.7	96.0	P/P	40 - 133
Ethoprop	79.5	92.0	P/P	61 - 121
Fenamiphos	89.2	104	P/P	31 - 139
Fenbuconazole	96.2	107	P/P	66 - 141
Fipronil	89.8	102	P/P	62 - 129
Fipronil Desulfinyl	96.4	110	P/P	59 - 126
Fipronil Sulfide	83.8	98.4	P/P	63 - 117
Fipronil Sulfone	91.5	88.9	P/P	57 - 117
Fluazifop-P-butyl	98.0	110	P/P	63 - 124
Fludioxonil	88.9	97.3	P/P	63 - 123
Flumioxazin	162	188	P/P	34 - 245
Flutolanil	85.3	97.5	P/P	56 - 131

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P400222

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluxapyroxad	83.1	91.8	P/P	57 - 117
Fonofos	80.2	86.3	P/P	61 - 116
Hexazinone	94.0	101	P/P	55 - 138
Imazalil	37.7	44.1	P/P	33 - 143
Iprodione	98.0	112	P/P	59 - 118
Malathion	92.9	105	P/P	62 - 138
Metalaxyl	90.1	103	P/P	24 - 147
Metolachlor	91.2	102	P/P	68 - 118
Metribuzin	83.6	94.4	P/P	20 - 239
Mevinphos	78.0	83.8	P/P	46 - 124
Molinate	58.8	66.4	P/P	46 - 100
Myclobutanil	88.1	96.7	P/P	32 - 149
Naled	45.0	51.7	P/P	32 - 95.0
Norflurazon	86.2	95.9	P/P	57 - 127
Oxadiazon	83.4	95.9	P/P	63 - 118
Oxyfluorfen	99.7	114	P/P	69 - 137
Parathion Ethyl	87.0	87.5	P/P	70 - 113
Parathion Methyl	97.6	102	P/P	71 - 130
Pendimethalin	93.5	93.2	P/P	55 - 118
Phorate	77.9	81.4	P/P	46 - 125
Prodiamine	63.9	84.8	P/P	20 - 141
Prometon	82.3	94.1	P/P	54 - 122
Prometryn	82.6	97.6	P/P	66 - 124
Pronamide	88.3	100	P/P	79 - 122
Propiconazole	82.1	92.6	P/P	61 - 126
Pyriproxyfen	82.1	98.0	P/P	52 - 131
Simazine	90.2	97.0	P/P	75 - 128
Sulfentrazone	80.9	92.2	P/P	20 - 132
Tebuconazole	57.6	64.6	P/P	20 - 116
Terbufos	97.1	110	P/P	61 - 117
Terbuthylazine	91.6	98.6	P/P	74 - 116

Reference Method: EPA 8321B
Batch ID: P400090

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	83.9		P	40 - 150
AMPA	97.9		P	40 - 150
Endothall	72.9		P	40 - 150
Glufosinate	96.7		P	40 - 150
Glyphosate	102		P	40 - 140
Sucralose	92.1		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P400315

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	120		P	30 - 160
2,4,5-T	128		P	30 - 160
Acetaminophen	83.0		P	30 - 160
Acetamiprid	90.6		P	30 - 160
Afidopyropen	73.6		P	30 - 160

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P400315

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bentazon	92.3		P	30 - 160
Benzovindiflupyr	92.8		P	30 - 160
Carbamazepine	92.0		P	30 - 160
Clothianidin	92.2		P	30 - 160
Dinotefuran	88.1		P	30 - 160
Diuron	73.7		P	30 - 160
Fenuron	99.7		P	30 - 160
Fluridone	87.6		P	30 - 160
Hydrocodone	94.6		P	30 - 160
Ibuprofen	86.0		P	30 - 160
Imazapyr	101		P	30 - 160
Imidacloprid	92.6		P	30 - 160
Linuron	73.3		P	30 - 160
Mandestrobin	94.1		P	30 - 160
MCPP	125		P	30 - 160
Naproxen	82.1		P	30 - 160
Primidone	93.3		P	30 - 160
Pyraclostrobin	81.1		P	30 - 160
Thiamethoxam	91.7		P	30 - 160
Tolfenpyrad	47.4		P	30 - 160
Triclopyr	122		P	30 - 160

Reference Method: SM 2120 B-2011
Batch ID: P400249

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	101		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P400616

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

Reference Method: SM 4500 F-C-2011
Batch ID: P400620

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.5		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P400534

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.3		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P400275

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2257175	Barium	99.7	99.6	P/P	80 - 120
2257175	Calcium	101		P	80 - 120
2257175	Iron	106	106	P/P	80 - 120
2257175	Magnesium	101		P	80 - 120
2257175	Manganese	98.9	98.8	P/P	80 - 120
2257175	Potassium	103	103	P/P	80 - 120
2257175	Sodium	103		P	80 - 120
2257175	Zinc	94.7	94.5	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P400275

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2257175	Aluminum	110	109	P/P	80 - 120
2257175	Antimony	112	110	P/P	80 - 120
2257175	Arsenic	108	107	P/P	80 - 120
2257175	Beryllium	104	103	P/P	80 - 120
2257175	Boron	115	114	P/P	80 - 120
2257175	Cadmium	107	107	P/P	80 - 120
2257175	Chromium	106	106	P/P	80 - 120
2257175	Copper	105	105	P/P	80 - 120
2257175	Lead	102	101	P/P	80 - 120
2257175	Nickel	107	106	P/P	80 - 120
2257175	Selenium	108	108	P/P	80 - 120
2257175	Silver	106	106	P/P	80 - 120
2257175	Thallium	111	111	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P400553

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2256981	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P400558

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2256981	Sulfate	100		P	90 - 110
2257258	Sulfate	94.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P400738

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2257123	Ammonia-N	95.0	95.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P400264

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2257089	NO2NO3-N	100	99.5	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P400339

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2257124	Total-P	104	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P400240

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2257101	O-Phosphate-P	95.8	96.3	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P400222

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2257106	Acetochlor	112	105	P/P	66 - 122
2257106	Alachlor	93.9	102	P/P	65 - 122
2257106	Ametryn	117	118	P/P	45 - 173
2257106	Atrazine Desethyl	48.1	50.7	P/P	25 - 150
2257106	Azinphos Methyl	121	110	P/P	44 - 174
2257106	Azoxystrobin	110	107	P/P	10 - 268
2257106	Butylate	69.4	55.6	P/P	15 - 97.0
2257106	Carbophenothion	101	98.2	P/P	42 - 129
2257106	Carfentrazone Ethyl	95.8	87.2	P/P	62 - 145
2257106	Chlorpyrifos Ethyl	136	94.5	F/P	60 - 124
2257106	Chlorpyrifos Methyl	99.2	97.9	P/P	66 - 119
2257106	Cyanazine	125	116	P/P	17 - 225
2257106	Demeton	49.7	51.3	P/P	36 - 142
2257106	Diazinon	101	96.3	P/P	70 - 128
2257106	Difenoconazole	172	144	P/P	33 - 222
2257106	Dimethenamid	83.1	80.6	P/P	54 - 125
2257106	Disulfoton	85.4	88.7	P/P	49 - 133
2257106	Dithiopyr	91.3	90.2	P/P	55 - 123
2257106	EPTC	52.5	40.6	P/P	19 - 91.0
2257106	Ethion	88.7	84.0	P/P	13 - 143
2257106	Ethoprop	98.3	91.3	P/P	49 - 144
2257106	Fenamiphos	66.9	73.9	P/P	32 - 136
2257106	Fenbuconazole	106	101	P/P	73 - 148
2257106	Fipronil Desulfinyl	91.6	98.8	P/P	49 - 127
2257106	Fluazifop-P-butyl	97.0	97.3	P/P	67 - 129
2257106	Fludioxonil	97.8	90.1	P/P	61 - 126
2257106	Flumioxazin	193	171	P/P	38 - 279
2257106	Flutolanil	81.7	78.8	P/P	55 - 136
2257106	Fluxapyroxad	90.2	84.6	P/P	33 - 140
2257106	Fonofos	91.9	95.6	P/P	58 - 125
2257106	Hexazinone	106	108	P/P	57 - 148
2257106	Imazalil	62.3	63.3	P/P	10 - 221
2257106	Iprodione	102	96.7	P/P	32 - 140
2257106	Malathion	120	124	P/P	52 - 138
2257106	Metalaxyl	83.6	91.9	P/P	46 - 134
2257106	Metolachlor	95.9	93.8	P/P	58 - 122
2257106	Metribuzin	99.8	102	P/P	16 - 272
2257106	Mevinphos	99.1	86.9	P/P	45 - 140
2257106	Molinate	75.9	65.1	P/P	41 - 103
2257106	Myclobutanil	96.4	97.0	P/P	60 - 134

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P400222

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2257106	Naled	57.0	54.7	P/P	20 - 113
2257106	Norflurazon	88.7	85.1	P/P	51 - 123
2257106	Oxadiazon	80.8	82.7	P/P	44 - 125
2257106	Oxyfluorfen	105	107	P/P	66 - 176
2257106	Parathion Ethyl	91.9	93.3	P/P	57 - 132
2257106	Parathion Methyl	112	102	P/P	59 - 156
2257106	Pendimethalin	105	106	P/P	59 - 129
2257106	Phorate	91.8	89.9	P/P	47 - 136
2257106	Prodiamine	71.0	77.8	P/P	10 - 159
2257106	Prometryn	78.8	86.3	P/P	59 - 129
2257106	Pronamide	92.0	99.5	P/P	65 - 145
2257106	Pyriproxyfen	71.7	74.3	P/P	21 - 180
2257106	Simazine	83.6	87.6	P/P	63 - 147
2257106	Sulfentrazone	93.0	86.5	P/P	32 - 136
2257106	Tebuconazole	42.8	49.0	P/P	10 - 117
2257106	Terbufos	118	111	P/P	61 - 131
2257106	Terbuthylazine	91.5	102	P/P	62 - 126

Reference Method: EPA 8321B
Batch ID: P400090

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2256374	Acesulfame K	105	77.0	P/P	40 - 150
2256374	AMPA	79.8	84.1	P/P	40 - 150
2256374	Endothall	102	99.8	P/P	40 - 150
2256374	Glufosinate	94.5	100	P/P	40 - 150
2256374	Glyphosate	100	100	P/P	40 - 140
2256374	Sucralose	94.2	101	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P400315

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2256868	2,4-D	122	124	P/P	30 - 160
2256868	2,4,5-T	113	116	P/P	30 - 160
2256868	Acetaminophen	112	112	P/P	30 - 160
2256868	Acetamiprid	82.4	74.6	P/P	30 - 160
2256868	Afidopyropen	71.1	57.7	P/P	30 - 160
2256868	Bentazon	79.5	74.5	P/P	30 - 160
2256868	Benzovindiflupyr	84.5	91.2	P/P	30 - 160
2256868	Carbamazepine	85.2	87.3	P/P	30 - 160
2256868	Clothianidin	114	107	P/P	30 - 160
2256868	Dinotefuran	125	123	P/P	30 - 160
2256868	Diuron	75.7	68.5	P/P	30 - 160
2256868	Fenuron	83.1	79.1	P/P	30 - 160
2256868	Fluridone	79.7	81.1	P/P	30 - 160
2256868	Hydrocodone	108	107	P/P	30 - 160
2256868	Ibuprofen	84.8	67.3	P/P	30 - 160
2256868	Imazapyr	168	159	F/P	30 - 160
2256868	Imidacloprid	148	155	P/P	30 - 160
2256868	Linuron	70.6	70.0	P/P	30 - 160
2256868	Mandestrobin	94.0	90.3	P/P	30 - 160

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P400315

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2256868	MCPP	113	112	P/P	30 - 160
2256868	Naproxen	97.4	75.5	P/P	30 - 160
2256868	Primidone	122	111	P/P	30 - 160
2256868	Pyraclostrobin	88.6	80.2	P/P	30 - 160
2256868	Thiamethoxam	145	148	P/P	30 - 160
2256868	Tolfenpyrad	53.7	55.9	P/P	30 - 160
2256868	Triclopyr	121	113	P/P	30 - 160

Reference Method: SM 4500 F-C-2011
Batch ID: P400620

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2256854	Fluoride	101	101	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P400534

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2257170	Organic Carbon	96.2	98.6	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P400253

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2257099	Turbidity	5.33	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P400275

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2257175	Barium	0.144	Spike	P	0 - 20
2257175	Calcium	1.64	Spike	P	0 - 20
2257175	Iron	0.400	Spike	P	0 - 20
2257175	Magnesium	0.0942	Spike	P	0 - 20
2257175	Manganese	0.0719	Spike	P	0 - 20
2257175	Potassium	0.0651	Spike	P	0 - 20
2257175	Sodium	1.70	Spike	P	0 - 20
2257175	Zinc	0.225	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P400275

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2257175	Aluminum	0.766	Spike	P	0 - 20
2257175	Antimony	1.82	Spike	P	0 - 20
2257175	Arsenic	1.17	Spike	P	0 - 20
2257175	Beryllium	1.34	Spike	P	0 - 20
2257175	Boron	0.285	Spike	P	0 - 20
2257175	Cadmium	0.474	Spike	P	0 - 20
2257175	Chromium	0.529	Spike	P	0 - 20
2257175	Copper	0.652	Spike	P	0 - 20
2257175	Lead	1.38	Spike	P	0 - 20
2257175	Nickel	0.421	Spike	P	0 - 20
2257175	Selenium	0.313	Spike	P	0 - 20
2257175	Silver	0.544	Spike	P	0 - 20
2257175	Thallium	0.439	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P400553

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2257258	Chloride	0.503	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P400558

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2257258	Sulfate	1.23	Sample	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P400738

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2257123	Ammonia-N	0.613	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P400685

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2257125	Kjeldahl Nitrogen	0.515	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P400264

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2257089	NO2NO3-N	1.00	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P400339

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2257124	Total-P	0.967	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P400240

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2257101	O-Phosphate-P	0.370	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P400222

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2257106	Acetochlor	6.25	Spike	P	0 - 30
2257106	Alachlor	8.18	Spike	P	0 - 30
2257106	Ametryn	0.721	Spike	P	0 - 30
2257106	Atrazine	3.25	Spike	P	0 - 30
2257106	Atrazine Desethyl	2.41	Spike	P	0 - 30
2257106	Azinphos Methyl	9.87	Spike	P	0 - 30
2257106	Azoxystrobin	2.11	Spike	P	0 - 30
2257106	Bromacil	5.69	Spike	P	0 - 30
2257106	Butylate	22.0	Spike	P	0 - 30
2257106	Caffeine	1.03	Spike	P	0 - 30
2257106	Carbophenothion	2.73	Spike	P	0 - 30
2257106	Carfentrazone Ethyl	9.49	Spike	P	0 - 30
2257106	Chlorpyrifos Ethyl	36.1	Spike	F	0 - 30
2257106	Chlorpyrifos Methyl	1.31	Spike	P	0 - 30
2257106	Cyanazine	6.92	Spike	P	0 - 30
2257106	Demeton	3.06	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P400222

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2257106	Diazinon	5.23	Spike	P	0 - 30
2257106	Difenoconazole	17.5	Spike	P	0 - 30
2257106	Dimethenamid	1.80	Spike	P	0 - 30
2257106	Disulfoton	3.90	Spike	P	0 - 30
2257106	Dithiopyr	0.997	Spike	P	0 - 30
2257106	EPTC	25.7	Spike	P	0 - 30
2257106	Ethion	5.35	Spike	P	0 - 30
2257106	Ethoprop	7.34	Spike	P	0 - 30
2257106	Fenamiphos	9.98	Spike	P	0 - 30
2257106	Fenbuconazole	4.59	Spike	P	0 - 30
2257106	Fipronil	2.34	Spike	P	0 - 30
2257106	Fipronil Desulfinyl	4.08	Spike	P	0 - 30
2257106	Fipronil Sulfide	4.75	Spike	P	0 - 30
2257106	Fipronil Sulfone	9.20	Spike	P	0 - 30
2257106	Fluazifop-P-butyl	0.318	Spike	P	0 - 30
2257106	Fludioxonil	8.16	Spike	P	0 - 30
2257106	Flumioxazin	10.2	Spike	P	0 - 30
2257106	Flutolanil	3.68	Spike	P	0 - 30
2257106	Fluxapyroxad	6.36	Spike	P	0 - 30
2257106	Fonofos	3.88	Spike	P	0 - 30
2257106	Hexazinone	1.22	Spike	P	0 - 30
2257106	Imazalil	1.61	Spike	P	0 - 30
2257106	Iprodione	5.10	Spike	P	0 - 30
2257106	Malathion	3.59	Spike	P	0 - 30
2257106	Metalaxyl	9.47	Spike	P	0 - 30
2257106	Metolachlor	1.88	Spike	P	0 - 30
2257106	Metribuzin	1.75	Spike	P	0 - 30
2257106	Mevinphos	13.2	Spike	P	0 - 30
2257106	Molinate	15.4	Spike	P	0 - 30
2257106	Myclobutanil	0.656	Spike	P	0 - 30
2257106	Naled	4.20	Spike	P	0 - 30
2257106	Norflurazon	4.09	Spike	P	0 - 30
2257106	Oxadiazon	1.68	Spike	P	0 - 30
2257106	Oxyfluorfen	2.20	Spike	P	0 - 30
2257106	Parathion Ethyl	1.56	Spike	P	0 - 30
2257106	Parathion Methyl	8.98	Spike	P	0 - 30
2257106	Pendimethalin	1.49	Spike	P	0 - 30
2257106	Phorate	2.06	Spike	P	0 - 30
2257106	Prodiamine	7.97	Spike	P	0 - 30
2257106	Prometon	1.44	Spike	P	0 - 30
2257106	Prometryn	9.10	Spike	P	0 - 30
2257106	Pronamide	7.76	Spike	P	0 - 30
2257106	Propiconazole	0.557	Spike	P	0 - 30
2257106	Pyriproxyfen	3.48	Spike	P	0 - 30
2257106	Simazine	2.28	Spike	P	0 - 30
2257106	Sulfentrazone	5.52	Spike	P	0 - 30
2257106	Tebuconazole	4.54	Spike	P	0 - 30
2257106	Terbufos	5.71	Spike	P	0 - 30
2257106	Terbuthylazine	10.5	Spike	P	0 - 30
LFB	Acetochlor	9.38	LCS	P	0 - 30
LFB	Alachlor	12.5	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P400222

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Ametryn	7.39	LCS	P	0 - 30
LFB	Atrazine	7.79	LCS	P	0 - 30
LFB	Atrazine Desethyl	22.8	LCS	P	0 - 30
LFB	Azinphos Methyl	11.5	LCS	P	0 - 30
LFB	Azoxystrobin	6.75	LCS	P	0 - 30
LFB	Bromacil	13.5	LCS	P	0 - 30
LFB	Butylate	19.9	LCS	P	0 - 30
LFB	Caffeine	1.46	LCS	P	0 - 30
LFB	Carbophenothion	7.09	LCS	P	0 - 30
LFB	Carfentrazone Ethyl	12.4	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	15.2	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	8.90	LCS	P	0 - 30
LFB	Cyanazine	5.08	LCS	P	0 - 30
LFB	Demeton	9.70	LCS	P	0 - 30
LFB	Diazinon	12.7	LCS	P	0 - 30
LFB	Difenoconazole	15.1	LCS	P	0 - 30
LFB	Dimethenamid	11.5	LCS	P	0 - 30
LFB	Disulfoton	8.29	LCS	P	0 - 30
LFB	Dithiopyr	13.9	LCS	P	0 - 30
LFB	EPTC	14.6	LCS	P	0 - 30
LFB	Ethion	16.2	LCS	P	0 - 30
LFB	Ethoprop	14.5	LCS	P	0 - 30
LFB	Fenamiphos	14.9	LCS	P	0 - 30
LFB	Fenbuconazole	10.2	LCS	P	0 - 30
LFB	Fipronil	13.0	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	13.0	LCS	P	0 - 30
LFB	Fipronil Sulfide	16.0	LCS	P	0 - 30
LFB	Fipronil Sulfone	2.97	LCS	P	0 - 30
LFB	Fluazifop-P-butyl	11.4	LCS	P	0 - 30
LFB	Fludioxonil	9.07	LCS	P	0 - 30
LFB	Flumioxazin	14.5	LCS	P	0 - 30
LFB	Flutolanil	13.3	LCS	P	0 - 30
LFB	Fluxapyroxad	10.0	LCS	P	0 - 30
LFB	Fonofos	7.44	LCS	P	0 - 30
LFB	Hexazinone	7.34	LCS	P	0 - 30
LFB	Imazalil	15.8	LCS	P	0 - 30
LFB	Iprodione	13.4	LCS	P	0 - 30
LFB	Malathion	11.9	LCS	P	0 - 30
LFB	Metalaxyl	13.5	LCS	P	0 - 30
LFB	Metolachlor	11.1	LCS	P	0 - 30
LFB	Metribuzin	12.2	LCS	P	0 - 30
LFB	Mevinphos	7.14	LCS	P	0 - 30
LFB	Molinate	12.1	LCS	P	0 - 30
LFB	Myclobutanil	9.32	LCS	P	0 - 30
LFB	Naled	13.8	LCS	P	0 - 30
LFB	Norflurazon	10.7	LCS	P	0 - 30
LFB	Oxadiazon	14.0	LCS	P	0 - 30
LFB	Oxyfluorfen	13.5	LCS	P	0 - 30
LFB	Parathion Ethyl	0.529	LCS	P	0 - 30
LFB	Parathion Methyl	4.52	LCS	P	0 - 30
LFB	Pendimethalin	0.357	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P400222

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Phorate	4.32	LCS	P	0 - 30
LFB	Prodiamine	28.1	LCS	P	0 - 30
LFB	Prometon	13.4	LCS	P	0 - 30
LFB	Prometryn	16.7	LCS	P	0 - 30
LFB	Pronamide	12.9	LCS	P	0 - 30
LFB	Propiconazole	12.1	LCS	P	0 - 30
LFB	Pyriproxyfen	17.7	LCS	P	0 - 30
LFB	Simazine	7.28	LCS	P	0 - 30
LFB	Sulfentrazone	13.0	LCS	P	0 - 30
LFB	Tebuconazole	11.4	LCS	P	0 - 30
LFB	Terbufos	12.7	LCS	P	0 - 30
LFB	Terbuthylazine	7.33	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P400090

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2256374	Acesulfame K	31.2	Spike	F	0 - 30
2256374	AMPA	5.21	Spike	P	0 - 30
2256374	Endothall	1.71	Spike	P	0 - 30
2256374	Glufosinate	5.98	Spike	P	0 - 30
2256374	Glyphosate	0.0759	Spike	P	0 - 30
2256374	Sucralose	6.69	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P400315

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2256868	2,4-D	1.26	Spike	P	0 - 30
2256868	2,4,5-T	3.02	Spike	P	0 - 30
2256868	Acetaminophen	0.0414	Spike	P	0 - 30
2256868	Acetamiprid	10.0	Spike	P	0 - 30
2256868	Afidopyropen	20.9	Spike	P	0 - 30
2256868	Bentazon	4.42	Spike	P	0 - 30
2256868	Benzovindiflupyr	7.62	Spike	P	0 - 30
2256868	Carbamazepine	2.49	Spike	P	0 - 30
2256868	Clothianidin	6.72	Spike	P	0 - 30
2256868	Dinotefuran	1.79	Spike	P	0 - 30
2256868	Diuron	9.87	Spike	P	0 - 30
2256868	Fenuron	4.91	Spike	P	0 - 30
2256868	Fluridone	1.73	Spike	P	0 - 30
2256868	Hydrocodone	1.10	Spike	P	0 - 30
2256868	Ibuprofen	23.0	Spike	P	0 - 30
2256868	Imazapyr	5.53	Spike	P	0 - 30
2256868	Imidacloprid	3.73	Spike	P	0 - 30
2256868	Linuron	0.884	Spike	P	0 - 30
2256868	Mandestrobin	4.05	Spike	P	0 - 30
2256868	MCPP	0.487	Spike	P	0 - 30
2256868	Naproxen	25.3	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P400315

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2256868	Primidone	9.27	Spike	P	0 - 30
2256868	Pyraclostrobin	9.94	Spike	P	0 - 30
2256868	Thiamethoxam	2.44	Spike	P	0 - 30
2256868	Tolfenpyrad	4.05	Spike	P	0 - 30
2256868	Triclopyr	6.44	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P400249

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2257099	Color (true)	1.22	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P400616

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2256854	Total Alkalinity	3.03	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P400605

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2257022	TDS	3.95	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P400620

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2256854	Fluoride	0.0	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P400534

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2257170	Organic Carbon	1.46	Spike	P	0 - 20

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2257104
Field Sample ID: 20030316

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	135	P	30 - 160
EPA 8321B	Acetaminophen-d4	119	P	30 - 160
EPA 8321B	Carbamazepine-d10	90.1	P	30 - 160
EPA 8321B	Diuron-d6	59.8	P	30 - 160
EPA 8321B	Endothall-d6	97.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	93.6	P	40 - 160
EPA 8321B	Ibuprofen-d3	89.5	P	30 - 160
EPA 8321B	Primidone-d5	120	P	30 - 160
EPA 8321B	Sucralose-d6	108	P	30 - 160

Lab Sample ID: 2257106
Field Sample ID: 20030316

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	70.4	P	20 - 200
EPA 8270E	Simazine-d10	119	P	73 - 135
EPA 8270E	Terbufos-d10	98.8	P	58 - 130

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A106298
Included Lab Sample IDs: 2257101

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.7	98.8	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A106300
Included Lab Sample IDs: 2257104

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	98.4	101	P/P	60 - 160
Glufosinate	104	104	P/P	60 - 160
Glyphosate	105	104	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A106301
Included Lab Sample IDs: 2257104

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	90.0	83.9	P/P	60 - 160
Endothall	86.2	74.9	P/P	60 - 160
Sucralose	94.1	95.9	P/P	60 - 160

Reference Method: SM 2120 B-2011
Run ID: A106303
Included Lab Sample IDs: 2257099

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: A106305
Included Lab Sample IDs: 2257099

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A106314
Included Lab Sample IDs: 2257100

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A106368
Included Lab Sample IDs: 2257100

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A106382
Included Lab Sample IDs: 2257105

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	107	107	P/P	90 - 110
Antimony	108	107	P/P	90 - 110
Arsenic	105	104	P/P	90 - 110
Beryllium	96.2	94.4	P/P	90 - 110
Boron	109	109	P/P	90 - 110
Cadmium	105	103	P/P	90 - 110
Chromium	103	101	P/P	90 - 110
Copper	106	104	P/P	90 - 110
Lead	98.1	98.2	P/P	90 - 110
Nickel	106	105	P/P	90 - 110
Selenium	106	105	P/P	90 - 110
Silver	105	105	P/P	90 - 110
Thallium	104	102	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A106390
Included Lab Sample IDs: 2257104

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	93.1	94.7	P/P	50 - 150
2,4,5-T	96.6	104	P/P	50 - 150
Acetaminophen	102	111	P/P	60 - 160
Acetamiprid	103	104	P/P	50 - 150
Afidopyropen	112	97.1	P/P	50 - 150
Bentazon	104	105	P/P	50 - 160
Benzovindiflupyr	113	113	P/P	50 - 160
Carbamazepine	105	111	P/P	60 - 150
Clothianidin	127	116	P/P	60 - 150
Dinotefuran	97.9	109	P/P	50 - 150
Diuron	113	105	P/P	60 - 160
Fenuron	101	99.6	P/P	60 - 150
Fluridone	97.5	101	P/P	60 - 160
Hydrocodone	107	109	P/P	60 - 150
Ibuprofen	96.7	96.7	P/P	50 - 160
Imazapyr	96.9	108	P/P	50 - 160
Imidacloprid	95.5	94.3	P/P	60 - 150
Linuron	104	114	P/P	60 - 150
Mandestrobin	113	107	P/P	50 - 150
MCPP	107	105	P/P	50 - 150
Naproxen	89.8	91.9	P/P	50 - 160
Primidone	113	101	P/P	60 - 150
Pyraclostrobin	105	104	P/P	60 - 150
Thiamethoxam	97.2	106	P/P	50 - 150
Tolfenpyrad	101	107	P/P	60 - 150
Triclopyr	109	103	P/P	50 - 150

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A106418
Included Lab Sample IDs: 2257105

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A106418
Included Lab Sample IDs: 2257105

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	98.7	97.2	P/P	95 - 105
Calcium	101	99.9	P/P	95 - 105
Iron	101	101	P/P	95 - 105
Magnesium	101	99.9	P/P	95 - 105
Manganese	99.9	97.1	P/P	95 - 105
Potassium	102	101	P/P	95 - 105
Sodium	99.7	99.3	P/P	95 - 105
Zinc	96.3	95.4	P/P	95 - 105

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A106423
Included Lab Sample IDs: 2257099

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

Reference Method: SM 5310 B-2011
Run ID: A106432
Included Lab Sample IDs: 2257100

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.8	97.2	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A106467
Included Lab Sample IDs: 2257106

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	98.9		P	80 - 120
Alachlor	107		P	80 - 120
Ametryn	108		P	80 - 120
Atrazine Desethyl	99.8		P	80 - 120
Azinphos Methyl	101		P	80 - 120
Azoxystrobin	97.8		P	80 - 120
Bromacil	97.7		P	80 - 120
Butylate	99.0		P	80 - 120
Caffeine	89.8		P	80 - 120
Carbophenothion	90.1		P	80 - 120
Carfentrazone Ethyl	94.2		P	80 - 120
Chlorpyrifos Ethyl	93.6		P	80 - 120
Chlorpyrifos Methyl	96.0		P	80 - 120
Cyanazine	95.9		P	80 - 120
Demeton	100		P	80 - 120
Diazinon	101		P	80 - 120
Difenoconazole	87.2		P	80 - 120
Dimethenamid	100		P	80 - 120
Disulfoton	94.7		P	80 - 120
Dithiopyr	103		P	80 - 120
EPTC	99.7		P	80 - 120
Ethion	97.5		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A106467
Included Lab Sample IDs: 2257106

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ethoprop	98.2		P	80 - 120
Fenamiphos	90.9		P	80 - 120
Fenbuconazole	95.3		P	80 - 120
Fipronil	102		P	80 - 120
Fipronil Desulfinyl	99.8		P	80 - 120
Fipronil Sulfide	94.0		P	80 - 120
Fipronil Sulfone	95.5		P	80 - 120
Fluazifop-P-butyl	97.3		P	80 - 120
Fludioxonil	97.9		P	80 - 120
Flumioxazin	93.4		P	80 - 120
Flutolanil	102		P	80 - 120
Fluxapyroxad	96.4		P	80 - 120
Fonofos	96.0		P	80 - 120
Hexazinone	98.5		P	80 - 120
Imazalil	94.5		P	80 - 120
Iprodione	101		P	80 - 120
Malathion	90.1		P	80 - 120
Metalaxyl	98.8		P	80 - 120
Metolachlor	102		P	80 - 120
Metribuzin	100		P	80 - 120
Mevinphos	96.3		P	80 - 120
Molinate	99.2		P	80 - 120
Myclobutanil	99.3		P	80 - 120
Naled	91.8		P	80 - 120
Norflurazon	95.6		P	80 - 120
Oxadiazon	103		P	80 - 120
Oxyfluorfen	92.9		P	80 - 120
Parathion Ethyl	95.6		P	80 - 120
Parathion Methyl	97.8		P	80 - 120
Pendimethalin	109		P	80 - 120
Phorate	101		P	80 - 120
Prodiamine	110		P	80 - 120
Prometon	103		P	80 - 120
Prometryn	100		P	80 - 120
Pronamide	95.7		P	80 - 120
Propiconazole	94.5		P	80 - 120
Pyriproxyfen	100		P	80 - 120
Simazine	102		P	80 - 120
Sulfentrazone	91.8		P	80 - 120
Tebuconazole	100		P	80 - 120
Terbufos	94.6		P	80 - 120
Terbuthylazine	100		P	80 - 120

Reference Method: EPA 8270E
Run ID: A106470
Included Lab Sample IDs: 2257106

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	102		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: SM 2320 B-2011
Run ID: A106477
Included Lab Sample IDs: 2257099

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	99.3	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Run ID: A106477
Included Lab Sample IDs: 2257099

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	102	104	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A106531
Included Lab Sample IDs: 2257100

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.5	97.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A106539
Included Lab Sample IDs: 2257100

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	90.4	100	P/P	90 - 110

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

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						5.33	
EPA 200.7 Rev. 4.4	Barium	100		99.7	99.6			0.144
	Calcium	102		101				1.64
	Iron	107		106	106			0.400
	Magnesium	101		101				0.0942
	Manganese	99.2		98.9	98.8			0.0719
	Potassium	105		103	103			0.0651
	Sodium	101		103				1.70
	Zinc	95.3		94.7	94.5			0.225
EPA 200.8 Rev. 5.4	Aluminum	111		110	109			0.766
	Antimony	109		112	110			1.82
	Arsenic	108		108	107			1.17
	Beryllium	104		104	103			1.34
	Boron	114		115	114			0.285
	Cadmium	104		107	107			0.474
	Chromium	104		106	106			0.529
	Copper	107		105	105			0.652
	Lead	100		102	101			1.38
	Nickel	107		107	106			0.421
	Selenium	108		108	108			0.313
	Silver	106		106	106			0.544
	Thallium	109		111	111			0.439
EPA 300.0 Rev. 2.1	Chloride	103		101			0.503	
	Sulfate	102		94.2	100		1.23	
EPA 350.1 Rev. 2.0	Ammonia-N	96.6		95.0	95.8			0.613
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104						0.515
EPA 353.2 Rev. 2.0	NO2NO3-N	100		100	99.5			1.00
EPA 365.1 Rev. 2.0	Total-P	105		104	103			0.967
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.0		95.8	96.3			0.370
EPA 8270E	Acetochlor	92.8	102	112	105	9.38		6.25
	Alachlor	93.5	106	93.9	102	12.5		8.18
	Ametryn	101	109	117	118	7.39		0.721
	Atrazine	94.9	103			7.79		3.25
	Atrazine Desethyl	60.7	76.3	48.1	50.7	22.8		2.41
	Azinphos Methyl	97.2	109	121	110	11.5		9.87
	Azoxystrobin	96.9	104	110	107	6.75		2.11
	Bromacil	81.3	93.0			13.5		5.69
	Butylate	46.6	56.8	69.4	55.6	19.9		22.0
	Caffeine	85.0	83.8			1.46		1.03
	Carbophenothion	100	108	101	98.2	7.09		2.73
	Carfentrazone Ethyl	95.2	108	95.8	87.2	12.4		9.49
	Chlorpyrifos Ethyl	84.9	98.8	136	94.5	15.2		36.1
	Chlorpyrifos Methyl	92.7	101	99.2	97.9	8.90		1.31
	Cyanazine	116	111	125	116	5.08		6.92
	Demeton	34.6	38.1	49.7	51.3	9.70		3.06
	Diazinon	90.5	103	101	96.3	12.7		5.23
	Difenoconazole	137	160	172	144	15.1		17.5
	Dimethenamid	74.7	83.8	83.1	80.6	11.5		1.80
	Disulfoton	78.4	85.2	85.4	88.7	8.29		3.90
	Dithiopyr	87.6	101	91.3	90.2	13.9		0.997
	EPTC	47.9	55.4	52.5	40.6	14.6		25.7
	Ethion	81.7	96.0	88.7	84.0	16.2		5.35
	Ethoprop	79.5	92.0	98.3	91.3	14.5		7.34
	Fenamiphos	89.2	104	66.9	73.9	14.9		9.98

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270E	Fenbuconazole	96.2	107	106	101	10.2		4.59
	Fipronil	89.8	102			13.0		2.34
	Fipronil Desulfinyl	96.4	110	91.6	98.8	13.0		4.08
	Fipronil Sulfide	83.8	98.4			16.0		4.75
	Fipronil Sulfone	91.5	88.9			2.97		9.20
	Fluazifop-P-butyl	98.0	110	97.0	97.3	11.4		0.318
	Fludioxonil	88.9	97.3	97.8	90.1	9.07		8.16
	Flumioxazin	162	188	193	171	14.5		10.2
	Flutolanil	85.3	97.5	81.7	78.8	13.3		3.68
	Fluxapyroxad	83.1	91.8	90.2	84.6	10.0		6.36
	Fonofos	80.2	86.3	91.9	95.6	7.44		3.88
	Hexazinone	94.0	101	106	108	7.34		1.22
	Imazalil	37.7	44.1	62.3	63.3	15.8		1.61
	Iprodione	98.0	112	102	96.7	13.4		5.10
	Malathion	92.9	105	120	124	11.9		3.59
	Metalaxyl	90.1	103	83.6	91.9	13.5		9.47
	Metolachlor	91.2	102	95.9	93.8	11.1		1.88
	Metribuzin	83.6	94.4	99.8	102	12.2		1.75
	Mevinphos	78.0	83.8	99.1	86.9	7.14		13.2
	Molinate	58.8	66.4	75.9	65.1	12.1		15.4
	Myclobutanil	88.1	96.7	96.4	97.0	9.32		0.656
	Naled	45.0	51.7	57.0	54.7	13.8		4.20
	Norflurazon	86.2	95.9	88.7	85.1	10.7		4.09
	Oxadiazon	83.4	95.9	80.8	82.7	14.0		1.68
	Oxyfluorfen	99.7	114	105	107	13.5		2.20
	Parathion Ethyl	87.0	87.5	91.9	93.3	0.529		1.56
	Parathion Methyl	97.6	102	112	102	4.52		8.98
	Pendimethalin	93.5	93.2	105	106	0.357		1.49
	Phorate	77.9	81.4	91.8	89.9	4.32		2.06
	Prodiamine	63.9	84.8	71.0	77.8	28.1		7.97
	Prometon	82.3	94.1			13.4		1.44
	Prometryn	82.6	97.6	78.8	86.3	16.7		9.10
	Pronamide	88.3	100	92.0	99.5	12.9		7.76
	Propiconazole	82.1	92.6			12.1		0.557
	Pyriproxyfen	82.1	98.0	71.7	74.3	17.7		3.48
	Simazine	90.2	97.0	83.6	87.6	7.28		2.28
	Sulfentrazone	80.9	92.2	86.5	93.0	13.0		5.52
	Tebuconazole	57.6	64.6	49.0	42.8	11.4		4.54
	Terbufos	97.1	110	111	118	12.7		5.71
	Terbuthylazine	91.6	98.6	102	91.5	7.33		10.5
EPA 8321B	2,4-D	120		122	124			1.26
	2,4,5-T	128		113	116			3.02
	Acesulfame K	83.9		105	77.0			31.2
	Acetaminophen	83.0		112	112			0.0414
	Acetamiprid	90.6		82.4	74.6			10.0
	Afidopyropen	73.6		71.1	57.7			20.9
	AMPA	97.9		79.8	84.1			5.21
	Bentazon	92.3		79.5	74.5			4.42
	Benzovindiflupyr	92.8		84.5	91.2			7.62
	Carbamazepine	92.0		85.2	87.3			2.49
	Clothianidin	92.2		114	107			6.72
	Dinotefuran	88.1		125	123			1.79
	Diuron	73.7		75.7	68.5			9.87
	Endothall	72.9		102	99.8			1.71

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8321B	Fenuron	99.7	83.1	79.1			4.91
	Fluridone	87.6	79.7	81.1			1.73
	Glufosinate	96.7	94.5	100			5.98
	Glyphosate	102	100	100			0.0759
	Hydrocodone	94.6	108	107			1.10
	Ibuprofen	86.0	84.8	67.3			23.0
	Imazapyr	101	168	159			5.53
	Imidacloprid	92.6	148	155			3.73
	Linuron	73.3	70.6	70.0			0.884
	Mandestrobin	94.1	94.0	90.3			4.05
	MCPP	125	113	112			0.487
	Naproxen	82.1	97.4	75.5			25.3
	Primidone	93.3	122	111			9.27
	Pyraclostrobin	81.1	88.6	80.2			9.94
	Sucralose	92.1	94.2	101			6.69
	Thiamethoxam	91.7	145	148			2.44
	Tolfenpyrad	47.4	53.7	55.9			4.05
	Triclopyr	122	121	113			6.44
SM 2120 B-2011	Color (true)	101				1.22	
SM 2320 B-2011	Total Alkalinity	102				3.03	
SM 2540 C-2011	TDS					3.95	
SM 4500 F-C-2011	Fluoride	98.5	101	101			0.0
SM 5310 B-2011	Organic Carbon	95.3	96.2	98.6			1.46

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2257099
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2257105
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2257105
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2257099
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2257099
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2257100
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2257100
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2257100
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2257100
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2257101
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2257106
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2257104
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2257099
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2257099
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2257105
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2257099
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2257099
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2257099
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2257100

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	06/25/2021			06/25/2021 15:13	Sarah A Nixon	2257099
EPA 200.7 Rev. 4.4	06/25/2021	06/28/2021 13:00	Elliott D. Healy	07/01/2021 14:19	Josef B Mick	2257105
EPA 200.8 Rev. 5.4	06/25/2021	06/28/2021 13:00	Elliott D. Healy	06/30/2021 16:10	McKinley C Carter	2257105
EPA 300.0 Rev. 2.1	06/25/2021			07/03/2021 04:28	Lipi Saha	2257099
EPA 350.1 Rev. 2.0	06/25/2021			07/09/2021 11:22	Roberta Tatti	2257100
EPA 351.2 Rev. 2.0	06/25/2021	07/08/2021 15:33	Madeline Gruver	07/09/2021 15:21	Letuzia M De Oliveira	2257100
EPA 353.2 Rev. 2.0	06/25/2021			06/28/2021 09:27	Beverly Y. Sanders	2257100
EPA 365.1 Rev. 2.0	06/25/2021	06/29/2021 13:16	Madeline Gruver	06/30/2021 11:45	Shengyu Ding	2257100
EPA 365.1 Rev. 2.0 dissolved	06/25/2021			06/25/2021 13:41	Lipi Saha	2257101
EPA 8270E	06/25/2021	06/28/2021 08:30	Rasheda Ghaffari	06/29/2021 15:54	Vandana T. Nagar	2257106
	06/25/2021	06/28/2021 08:30	Rasheda Ghaffari	07/02/2021 16:57	Vandana T. Nagar	2257106
EPA 8321B	06/25/2021	06/25/2021 12:00	Pramila Ghimire	06/25/2021 14:49	Juyoung Kim	2257104
	06/25/2021	06/25/2021 12:00	Pramila Ghimire	06/25/2021 23:28	Pramila Ghimire	2257104
	06/25/2021	06/30/2021 09:00	Hoor Shaik	06/30/2021 23:56	Juyoung Kim	2257104
SM 2120 B-2011	06/25/2021			06/25/2021 16:13	Benjamin T. Nordmann	2257099
SM 2320 B-2011	06/25/2021			07/07/2021 02:54	Patrick M. Roche	2257099
SM 2340B	06/25/2021			07/01/2021 14:19	Josef B Mick	2257105
SM 2540 C-2011	06/25/2021			06/28/2021 14:25	Yijie Li	2257099
SM 2540 D-2011	06/25/2021			06/28/2021 14:25	Yijie Li	2257099
SM 4500 F-C-2011	06/25/2021			07/07/2021 02:54	Patrick M. Roche	2257099
SM 5310 B-2011	06/25/2021			07/01/2021 13:57	Madeline Gruver	2257100