

Chemical Analysis Report

CEN-DIST-2022-01-13-01

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

Event Description: **Run 4**
Request ID: **RQ-2022-01-10-18**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
Attn: Matthew Bearden

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: 03-FEB-2022 09:28

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: Tiger Lake near Center

Collection Date/Time: 01/12/2022 12:05

Field ID: G4CE0206

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299672	EPA 180.1 Rev. 2.0	Turbidity	14		NTU	P408515	
	EPA 300.0 Rev. 2.1	Chloride	20		mg Cl/L	P409186	
		Sulfate	14		mg SO4/L	P409192	
	SM 2120 B-2011	Color (true)**	32		PCU	P408518	
	SM 2320 B-2011	Total Alkalinity	31		mg CaCO3/L	P408610	
	SM 2540 C-2011	TDS	102		mg/L	P408978	
	SM 2540 D-2011	TSS	17	I	mg/L	P408951	
	SM 4500 F-C-2011	Fluoride	0.091	I	mg F/L	P408613	
2299673	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P409227	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P408849	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P408681	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P408651	
	SM 5310 B-2011	Organic Carbon	16		mg C/L	P408958	
2299674	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P408507	
2299677	EPA 8321B	2,4-D	0.070		ug/L	P408581	
		Acesulfame K	0.10	U	ug/L	P408582	
		2,4,5-T	0.0040	U	ug/L	P408581	
		AMPA	0.10	U	ug/L	P408582	MS
		Sucralose	0.039	I	ug/L	P408582	MS
		Acetaminophen	0.0080	U	ug/L	P408581	
		Acetamiprid	0.0020	U	ug/L	P408581	
		Endothall	0.25	U	ug/L	P408582	MS
		Glufosinate	0.10	U	ug/L	P408582	
		Glyphosate	0.10	U	ug/L	P408582	
		Afidopyropen	0.0020	U	ug/L	P408581	
		Bentazon	8.0E-04	U	ug/L	P408581	
		Benzovindiflupyr	0.0020	U	ug/L	P408581	
		Carbamazepine	8.0E-04	U	ug/L	P408581	
		Clothianidin	0.0020	U	ug/L	P408581	MS
		Dinotefuran	0.0020	U	ug/L	P408581	
		Diuron	0.0020	U	ug/L	P408581	
		Fenuron	0.016	U	ug/L	P408581	
		Fluridone	0.0061		ug/L	P408581	
		Imazapyr	0.0081	I	ug/L	P408581	
		Hydrocodone	0.0020	U	ug/L	P408581	
		Ibuprofen	0.020	U	ug/L	P408581	
		Imidacloprid	0.0065	I	ug/L	P408581	MS
		Linuron	0.0040	U	ug/L	P408581	
		Mandestrobin	0.0020	U	ug/L	P408581	
		MCPP	0.0040	U	ug/L	P408581	
		Naproxen	0.0080	U	ug/L	P408581	
		Primidone	0.0040	U	ug/L	P408581	RPD
		Pyraclostrobin	0.0020	U	ug/L	P408581	

Field ID: G4CE0206

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299677	EPA 8321B	Silvex	0.0040	U	ug/L	P408581	
		Thiamethoxam	0.0020	U	ug/L	P408581	MS
		Tolfenpyrad	0.0020	U	ug/L	P408581	
		Triclopyr	0.0040	U	ug/L	P408581	
2299679	EPA 200.7 Rev. 4.4	Calcium	13.2		mg/L	P408711	
		Iron	400		ug/L	P408711	
		Magnesium	5.15		mg/L	P408711	
		Potassium	4.9		mg/L	P408711	
		Sodium	9.3		mg/L	P408711	
		Strontium	212		ug/L	P408711	
		Tin	3.0	U	ug/L	P408711	
		Titanium	0.75	U	ug/L	P408711	
		Vanadium	2.0	U	ug/L	P408711	
		Zinc	5.0	U	ug/L	P408711	
	EPA 200.8 Rev. 5.4	Aluminum	26		ug/L	P408711	
		Antimony	0.051	I	ug/L	P408711	
		Arsenic	0.62		ug/L	P408711	
		Barium	20.6		ug/L	P408711	
		Beryllium	0.010	I	ug/L	P408711	
		Boron**	32.6		ug/L	P408711	
		Cadmium	0.020	U	ug/L	P408711	
		Chromium	0.40	U	ug/L	P408711	
		Cobalt	0.121		ug/L	P408711	
		Copper	0.40	U	ug/L	P408711	
		Lead	0.25	I	ug/L	P408711	
		Manganese	19.4		ug/L	P408711	
		Molybdenum	0.46	I	ug/L	P408711	
		Nickel	0.50	U	ug/L	P408711	
		Selenium	0.20	U	ug/L	P408711	
		Silver	0.010	U	ug/L	P408711	
		Thallium	0.10	U	ug/L	P408711	
	SM 2340B	Hardness	54.2		mg/L	P408711	
2299680	EPA 8270E	Acetochlor	0.24	U	ng/L	P408428	
		Alachlor	0.24	U	ng/L	P408428	
		Ametryn	0.57	U	ng/L	P408428	
		Atrazine	78		ng/L	P408428	
		Atrazine Desethyl	12		ng/L	P408428	
		Azinphos Methyl	1.9	U	ng/L	P408428	
		Azoxystrobin**	0.48	U	ng/L	P408428	
		Bromacil	0.48	U	ng/L	P408428	
		Butylate	0.38	U	ng/L	P408428	
		Caffeine**	7.1	U	ng/L	P408428	
		Carbophenothion	0.19	U	ng/L	P408428	
		Carfentrazone Ethyl**	0.095	U	ng/L	P408428	
		Chlorfenapyr**	0.17	U	ng/L	P408428	

Field ID: G4CE0206

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299680	EPA 8270E	Chlorpyrifos Ethyl	0.24	U	ng/L	P408428	
		Chlorpyrifos Methyl	0.048	U	ng/L	P408428	
		Coumaphos**	0.48	U	ng/L	P408428	
		Cyanazine	3.1	U	ng/L	P408428	
		Cyprodinil**	0.095	U	ng/L	P408428	
		Demeton	1.4	U	ng/L	P408428	
		Diazinon	0.12	U	ng/L	P408428	
		Difenoconazole**	0.57	U	ng/L	P408428	
		Dimethenamid**	0.095	U	ng/L	P408428	
		Dimethomorph**	0.17	U	ng/L	P408428	
		Disulfoton	0.48	U	ng/L	P408428	
		Dithiopyr**	0.17	U	ng/L	P408428	
		EPTC	1.2	U	ng/L	P408428	
		Ethion	0.14	U	ng/L	P408428	
		Ethoprop	0.095	U	ng/L	P408428	
		Etridiazole**	0.14	U	ng/L	P408428	
		Fenamiphos	0.48	U	ng/L	P408428	
		Fenbuconazole**	0.18	I	ng/L	P408428	
		Fipronil	0.24	U	ng/L	P408428	
		Fipronil Desulfinyl**	0.12	U	ng/L	P408428	
		Fipronil Sulfide	0.14	U	ng/L	P408428	
		Fipronil Sulfone	0.14	U	ng/L	P408428	
		Fluazifop-P-butyl**	0.095	U	ng/L	P408428	
		Fludioxonil**	0.12	U	ng/L	P408428	
		Flumioxazin**	1.7	U	ng/L	P408428	
		Flutolanil**	0.095	U	ng/L	P408428	
		Fluxapyroxad**	0.095	U	ng/L	P408428	
		Fonofos	0.19	U	ng/L	P408428	
		Hexazinone	13		ng/L	P408428	
		Imazalil**	0.71	U	ng/L	P408428	
		Iprodione**	0.57	U	ng/L	P408428	
		Loratadine**	0.095	U	ng/L	P408428	
		Malathion	0.33	U	ng/L	P408428	
		Metalaxyl	0.97	I	ng/L	P408428	
		Metolachlor	0.33	U	ng/L	P408428	
		Metribuzin	2.4	U	ng/L	P408428	
		Mevinphos	1.0	UJ	ng/L	P408428	LCS, MS, RPD
		Molinate	0.29	U	ng/L	P408428	
		Myclobutanil**	0.24	U	ng/L	P408428	
		Naled**	1.4	U	ng/L	P408428	
		Napropamide**	0.38	U	ng/L	P408428	
		Norflurazon	1.8	I	ng/L	P408428	
		Oxadiazon	0.29	U	ng/L	P408428	
		Oxyfluorfen**	0.14	U	ng/L	P408428	

Field ID: G4CE0206

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299680	EPA 8270E	Parathion Ethyl	0.24	U	ng/L	P408428	
		Parathion Methyl	0.52	U	ng/L	P408428	
		Pendimethalin	0.95	U	ng/L	P408428	
		Phenytol**	3.3	U	ng/L	P408428	
		Phorate	0.50	U	ng/L	P408428	
		Prodiatone**	0.17	U	ng/L	P408428	
		Prometon	0.86	U	ng/L	P408428	
		Prometryn	0.19	U	ng/L	P408428	
		Pronamide**	0.14	U	ng/L	P408428	
		Propanil**	0.12	U	ng/L	P408428	
		Propargite**	1.4	U	ng/L	P408428	
		Propiconazole**	0.48	U	ng/L	P408428	
		Pyraflufen Ethyl**	0.24	U	ng/L	P408428	
		Pyridaben**	9.9		ng/L	P408428	
		Pyriproxyfen**	0.12	U	ng/L	P408428	
		Simazine	35		ng/L	P408428	
		Stirophos**	0.12	U	ng/L	P408428	
		Sulfentrazone**	0.48	U	ng/L	P408428	
		Tebuconazole**	0.48	U	ng/L	P408428	
		Terbufos	0.095	U	ng/L	P408428	
		Terbutylazine	0.40	U	ng/L	P408428	
		Thiobencarb**	0.57	U	ng/L	P408428	
		Triadimefon**	0.24	U	ng/L	P408428	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low 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. The PQL was elevated because of sample matrix interference.

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

EPA 8270E: MS accuracy for multiple 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.

Sample Location: Lake Smart at Center

Collection Date/Time: 01/12/2022 13:32

Field ID: G3CE0055

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299678	EPA 8321B	2,4-D	0.028		ug/L	P408581	
		Acesulfame K	0.10	U	ug/L	P408582	
		2,4,5-T	0.0040	U	ug/L	P408581	
		AMPA	10	U	ug/L	P408582	MS
		Sucralose	0.053		ug/L	P408582	MS
		Acetaminophen	0.0080	U	ug/L	P408581	
		Acetamiprid	0.0020	U	ug/L	P408581	
		Endothall	0.25	U	ug/L	P408582	MS
		Glufosinate	10	U	ug/L	P408582	
		Glyphosate	10	U	ug/L	P408582	
		Afidopyropen	0.0020	U	ug/L	P408581	
		Bentazon	0.0020	I	ug/L	P408581	
		Benzovindiflupyr	0.0020	U	ug/L	P408581	
		Carbamazepine	8.0E-04	U	ug/L	P408581	
		Clothianidin	0.0052	I	ug/L	P408581	MS
		Dinotefuran	0.0020	U	ug/L	P408581	
		Diuron	0.0020	U	ug/L	P408581	
		Fenuron	0.016	U	ug/L	P408581	
		Fluridone	0.014		ug/L	P408581	
		Imazapyr	0.0092	I	ug/L	P408581	
		Hydrocodone	0.0020	U	ug/L	P408581	
		Ibuprofen	0.020	U	ug/L	P408581	
		Imidacloprid	0.51		ug/L	P408581	MS
		Linuron	0.0040	U	ug/L	P408581	
		Mandestrobin	0.0020	U	ug/L	P408581	
		MCPP	0.0040	U	ug/L	P408581	
		Naproxen	0.0080	U	ug/L	P408581	
		Primidone	0.0059	I	ug/L	P408581	RPD
		Pyraclostrobin	0.0020	U	ug/L	P408581	
		Silvex	0.0040	U	ug/L	P408581	
		Thiamethoxam	0.016		ug/L	P408581	MS
		Tolfenpyrad	0.0020	U	ug/L	P408581	
		Triclopyr	0.0040	U	ug/L	P408581	

Ref. Method and Comment:

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

EPA 8321B: Some MDLs are elevated due to required dilution of sample matrix.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P408515

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P408711

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Strontium	2.0	U	ug/L
Tin	3.0	U	ug/L
Titanium	0.75	U	ug/L
Vanadium	2.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P408711

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409186

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409192

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: P409227

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408849

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P408681

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408651

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P408507

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

Reference Method: EPA 8270E
Batch ID: P408428

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	0.20	U	ng/L
Carbophenothion	0.20	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P408428

Component	Result	Code	Units
Carfentrazone Ethyl	0.10	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Chlorfenapyr	0.18	U	ng/L
Chlorfenapyr	0.18	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Coumaphos	0.50	U	ng/L
Coumaphos	0.50	U	ng/L
Cyanazine	3.2	U	ng/L
Cyanazine	3.2	U	ng/L
Cyprodinil	0.10	U	ng/L
Cyprodinil	0.10	U	ng/L
Demeton	1.5	U	ng/L
Demeton	1.5	U	ng/L
Diazinon	0.12	U	ng/L
Diazinon	0.12	U	ng/L
Difenoconazole	0.60	U	ng/L
Difenoconazole	0.60	U	ng/L
Dimethenamid	0.10	U	ng/L
Dimethenamid	0.10	U	ng/L
Dimethomorph	0.18	U	ng/L
Dimethomorph	0.18	U	ng/L
Disulfoton	0.50	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.18	U	ng/L
Dithiopyr	0.18	U	ng/L
EPTC	1.2	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Ethoprop	0.10	U	ng/L
Etridiazole	0.15	U	ng/L
Etridiazole	0.15	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fludioxonil	0.12	U	ng/L
Fludioxonil	0.12	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P408428

Component	Result	Code	Units
Flumioxazin	1.8	U	ng/L
Flumioxazin	1.8	U	ng/L
Flutolanil	0.10	U	ng/L
Flutolanil	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fonofos	0.20	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Hexazinone	0.50	U	ng/L
Imazalil	0.75	U	ng/L
Imazalil	0.75	U	ng/L
Iprodione	0.60	U	ng/L
Iprodione	0.60	U	ng/L
Loratadine	0.10	U	ng/L
Loratadine	0.10	U	ng/L
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	2.5	U	ng/L
Metribuzin	2.5	U	ng/L
Mevinphos	1.0	U	ng/L
Mevinphos	1.0	U	ng/L
Molinate	0.30	U	ng/L
Molinate	0.30	U	ng/L
Myclobutanil	0.25	U	ng/L
Myclobutanil	0.25	U	ng/L
Naled	1.5	U	ng/L
Naled	1.5	U	ng/L
Napropamide	0.40	U	ng/L
Napropamide	0.40	U	ng/L
Norflurazon	0.50	U	ng/L
Norflurazon	0.50	U	ng/L
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
Phenytol	3.5	U	ng/L
Phenytol	3.5	U	ng/L
Phorate	0.52	U	ng/L
Phorate	0.52	U	ng/L
Prodiatamine	0.18	U	ng/L
Prodiatamine	0.18	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P408428

Component	Result	Code	Units
Prometon	0.90	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Prometryn	0.20	U	ng/L
Pronamide	0.15	U	ng/L
Pronamide	0.15	U	ng/L
Propanil	0.12	U	ng/L
Propanil	0.12	U	ng/L
Propargite	1.5	U	ng/L
Propargite	1.5	U	ng/L
Propiconazole	0.50	U	ng/L
Propiconazole	0.50	U	ng/L
Pyraflufen Ethyl	0.25	U	ng/L
Pyraflufen Ethyl	0.25	U	ng/L
Pyridaben	0.45	U	ng/L
Pyridaben	0.45	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Simazine	0.50	U	ng/L
Simazine	0.50	U	ng/L
Stirophos	0.12	U	ng/L
Stirophos	0.12	U	ng/L
Sulfentrazone	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L
Terbuthylazine	0.42	U	ng/L
Thiobencarb	0.60	U	ng/L
Thiobencarb	0.60	U	ng/L
Triadimefon	0.25	U	ng/L
Triadimefon	0.25	U	ng/L

Reference Method: EPA 8321B

Batch ID: P408581

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P408581

Component	Result	Code	Units
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	0.0040	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B

Batch ID: P408582

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B-2011

Batch ID: P408518

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011

Batch ID: P408610

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

Reference Method: SM 2540 C-2011

Batch ID: P408978

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011

Batch ID: P408951

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500 F-C-2011
Batch ID: P408613

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P408958

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: P408711

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	106		P	85 - 115
Iron	107		P	85 - 115
Magnesium	106		P	85 - 115
Potassium	104		P	85 - 115
Sodium	106		P	85 - 115
Strontium	105		P	85 - 115
Tin	107		P	85 - 115
Titanium	107		P	85 - 115
Vanadium	105		P	85 - 115
Zinc	104		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P408711

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.4		P	85 - 115
Antimony	100		P	85 - 115
Arsenic	101		P	85 - 115
Barium	104		P	85 - 115
Beryllium	99.7		P	85 - 115
Boron	94.1		P	85 - 115
Cadmium	98.6		P	85 - 115
Chromium	100		P	85 - 115
Cobalt	98.1		P	85 - 115
Copper	100		P	85 - 115
Lead	94.1		P	85 - 115
Manganese	99.2		P	85 - 115
Molybdenum	101		P	85 - 115
Nickel	101		P	85 - 115
Selenium	98.8		P	85 - 115
Silver	99.9		P	85 - 115
Thallium	102		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P409186

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P409192

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	96.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P409227

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P408849

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P408681

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P408651

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P408507

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

Reference Method: EPA 8270E

Batch ID: P408428

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	96.2		P	70 - 121
Alachlor	85.4		P	68 - 119
Ametryn	102		P	64 - 139
Atrazine	87.9		P	76 - 120
Atrazine Desethyl	45.1		P	44 - 126
Azinphos Methyl	87.6		P	43 - 192
Azoxystrobin	98.7		P	36 - 224
Bromacil	70.8		P	52 - 121
Butylate	60.1		P	28 - 91.0
Caffeine	103		P	50 - 134
Carbophenothion	100		P	56 - 129
Carfentrazone Ethyl	95.0		P	60 - 141
Chlorfenapyr	82.6		P	56 - 115
Chlorpyrifos Ethyl	95.5		P	60 - 118
Chlorpyrifos Methyl	91.2		P	68 - 119
Coumaphos	155		P	18 - 250
Cyanazine	97.9		P	44 - 205
Cyprodinil	103		P	55 - 145
Demeton	69.0		P	41 - 118
Diazinon	98.5		P	70 - 123
Difenoconazole	78.1		P	49 - 204
Dimethenamid	76.8		P	64 - 115
Dimethomorph	101		P	12 - 219
Disulfoton	86.1		P	44 - 125
Dithiopyr	89.9		P	64 - 115
EPTC	55.0		P	28 - 86.0
Ethion	90.9		P	33 - 125
Ethoprop	72.2		P	64 - 116

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P408428

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Etridiazole	57.9		P	34 - 91.0
Fenamiphos	96.3		P	59 - 126
Fenbuconazole	135		P	59 - 151
Fipronil	92.9		P	67 - 129
Fipronil Desulfinyl	90.5		P	65 - 127
Fipronil Sulfide	85.2		P	61 - 116
Fipronil Sulfone	81.1		P	55 - 117
Fluazifop-P-butyl	90.6		P	62 - 127
Fludioxonil	85.4		P	62 - 128
Flumioxazin	217		P	33 - 250
Flutolanil	72.5		P	56 - 127
Fluxapyroxad	125		P	45 - 128
Fonofos	85.3		P	62 - 111
Hexazinone	90.6		P	64 - 125
Imazalil	90.9		P	38 - 142
Iprodione	53.7		P	47 - 135
Loratadine	83.0		P	10 - 244
Malathion	93.6		P	61 - 139
Metalaxyl	81.7		P	57 - 127
Metolachlor	91.4		P	65 - 118
Metribuzin	87.3		P	47 - 161
Mevinphos	47.6		F	53 - 121
Molinate	69.3		P	42 - 96.0
Myclobutanil	84.3		P	55 - 128
Naled	87.5		P	10 - 98.0
Napropamide	86.6		P	49 - 121
Norflurazon	91.7		P	61 - 126
Oxadiazon	76.2		P	59 - 116
Oxyfluorfen	95.8		P	64 - 137
Parathion Ethyl	88.2		P	70 - 112
Parathion Methyl	105		P	76 - 133
Pendimethalin	73.5		P	52 - 117
Phenytoin	65.7		P	10 - 199
Phorate	52.7		P	48 - 121
Prodiamine	89.9		P	10 - 136
Prometon	113		P	61 - 121
Prometryn	92.0		P	66 - 127
Pronamide	89.7		P	75 - 121
Propanil	72.4		P	45 - 150
Propargite	116		P	42 - 208
Propiconazole	99.0		P	60 - 125
Pyraflufen Ethyl	106		P	70 - 138
Pyridaben	171		P	35 - 245
Pyriproxyfen	44.9		P	30 - 149
Simazine	82.3		P	72 - 125
Stirophos	89.3		P	29 - 164
Sulfentrazone	91.0		P	21 - 139
Tebuconazole	110		P	10 - 115
Terbufos	96.6		P	60 - 123
Terbuthylazine	86.1		P	72 - 115
Thiobencarb	88.4		P	31 - 139
Triadimefon	86.7		P	65 - 116

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P408581

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	114		P	40 - 150
2,4,5-T	106		P	40 - 150
Acetaminophen	85.5		P	30 - 150
Acetamiprid	96.7		P	40 - 150
Afidopyropen	80.4		P	40 - 150
Bentazon	81.0		P	30 - 150
Benzovindiflupyr	117		P	40 - 150
Carbamazepine	112		P	40 - 150
Clothianidin	92.7		P	40 - 150
Dinotefuran	105		P	40 - 150
Diuron	82.3		P	40 - 150
Fenuron	100		P	40 - 150
Fluridone	73.4		P	40 - 150
Hydrocodone	86.4		P	40 - 150
Ibuprofen	145		P	40 - 150
Imazapyr	104		P	40 - 150
Imidacloprid	79.9		P	40 - 150
Linuron	91.7		P	40 - 150
Mandestrobin	114		P	40 - 150
MCPP	102		P	40 - 150
Naproxen	98.8		P	40 - 150
Primidone	91.6		P	40 - 150
Pyraclostrobin	89.6		P	40 - 150
Silvex	75.6		P	40 - 150
Thiamethoxam	99.5		P	40 - 150
Tolfenpyrad	51.7		P	30 - 150
Triclopyr	126		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P408582

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	101		P	40 - 150
AMPA	137		P	40 - 150
Endothall	106		P	40 - 150
Glufosinate	139		P	40 - 150
Glyphosate	130		P	40 - 150
Sucralose	108		P	40 - 150

Reference Method: SM 2120 B-2011

Batch ID: P408518

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.4		P	85 - 115

Reference Method: SM 2320 B-2011

Batch ID: P408610

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.9		P	94 - 106

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P408613

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.9		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P408958

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.1		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P408711

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299928	Calcium	101		P	80 - 120
2299928	Iron	110		P	80 - 120
2299928	Magnesium	104		P	80 - 120
2299928	Potassium	106		P	80 - 120
2299928	Sodium	104		P	80 - 120
2299928	Strontium	108		P	80 - 120
2299928	Tin	110		P	80 - 120
2299928	Titanium	111		P	80 - 120
2299928	Vanadium	110		P	80 - 120
2299928	Zinc	107		P	80 - 120
2299995	Calcium	108	105	P/P	80 - 120
2299995	Iron	108	107	P/P	80 - 120
2299995	Magnesium	108	106	P/P	80 - 120
2299995	Potassium	104	104	P/P	80 - 120
2299995	Sodium	104	103	P/P	80 - 120
2299995	Strontium	107	106	P/P	80 - 120
2299995	Tin	109	109	P/P	80 - 120
2299995	Titanium	109	109	P/P	80 - 120
2299995	Vanadium	106	106	P/P	80 - 120
2299995	Zinc	105	104	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P408711

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299928	Aluminum	98.0		P	80 - 120
2299928	Antimony	103		P	80 - 120
2299928	Arsenic	103		P	80 - 120
2299928	Barium	106		P	80 - 120
2299928	Beryllium	101		P	80 - 120
2299928	Boron	98.4		P	80 - 120
2299928	Cadmium	101		P	80 - 120
2299928	Chromium	103		P	80 - 120
2299928	Cobalt	98.0		P	80 - 120
2299928	Copper	97.9		P	80 - 120
2299928	Lead	95.4		P	80 - 120
2299928	Manganese	101		P	80 - 120
2299928	Molybdenum	103		P	80 - 120
2299928	Nickel	99.1		P	80 - 120
2299928	Selenium	99.5		P	80 - 120
2299928	Silver	98.6		P	80 - 120
2299928	Thallium	105		P	80 - 120
2299995	Aluminum	101	101	P/P	80 - 120
2299995	Antimony	101	98.7	P/P	80 - 120
2299995	Arsenic	101	99.2	P/P	80 - 120
2299995	Barium	107	104	P/P	80 - 120
2299995	Beryllium	100	95.0	P/P	80 - 120
2299995	Boron	97.8	95.7	P/P	80 - 120
2299995	Cadmium	101	97.9	P/P	80 - 120
2299995	Chromium	102	100	P/P	80 - 120
2299995	Cobalt	99.0	96.3	P/P	80 - 120
2299995	Copper	102	99.6	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P408711

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299995	Lead	95.9	95.2	P/P	80 - 120
2299995	Manganese	104	101	P/P	80 - 120
2299995	Molybdenum	101	99.0	P/P	80 - 120
2299995	Nickel	102	99.9	P/P	80 - 120
2299995	Selenium	98.9	97.2	P/P	80 - 120
2299995	Silver	101	97.6	P/P	80 - 120
2299995	Thallium	106	106	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409186

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299471	Chloride	100		P	90 - 110
2299634	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409192

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299471	Sulfate	96.3		P	90 - 110
2299634	Sulfate	95.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409227

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299673	Ammonia-N	103	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408849

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299446	Kjeldahl Nitrogen	109	107	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P408681

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299638	NO2NO3-N	97.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408651

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299637	Total-P	107	109	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P408507

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299641	O-Phosphate-P	96.7	97.6	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P408428

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2298468	Acetochlor	96.4	88.6	P/P	65 - 124
2298468	Alachlor	101	82.5	P/P	61 - 121
2298468	Ametryn	107	98.4	P/P	46 - 169
2298468	Atrazine	81.3	79.0	P/P	68 - 133
2298468	Atrazine Desethyl	36.9	36.7	P/P	26 - 133
2298468	Azinphos Methyl	83.8	71.2	P/P	10 - 228
2298468	Azoxystrobin	98.6	94.8	P/P	12 - 242
2298468	Butylate	57.6	62.2	P/P	14 - 94.0
2298468	Caffeine	149	113	P/P	10 - 226
2298468	Carbophenothion	78.2	81.8	P/P	49 - 122
2298468	Carfentrazone Ethyl	87.1	84.4	P/P	53 - 138
2298468	Chlorfenapyr	68.3	75.0	P/P	50 - 150
2298468	Chlorpyrifos Ethyl	72.8	71.9	P/P	52 - 122
2298468	Chlorpyrifos Methyl	76.9	72.0	P/P	66 - 117
2298468	Coumaphos	133	137	P/P	50 - 220
2298468	Cyanazine	99.7	94.8	P/P	27 - 211
2298468	Cyprodinil	88.7	97.1	P/P	50 - 150
2298468	Demeton	64.7	62.2	P/P	46 - 132
2298468	Diazinon	97.2	98.5	P/P	69 - 131
2298468	Difenoconazole	67.9	66.6	P/P	34 - 231
2298468	Dimethenamid	75.9	72.5	P/P	55 - 118
2298468	Dimethomorph	86.0	80.2	P/P	50 - 150
2298468	Disulfoton	80.1	73.0	P/P	38 - 141
2298468	Dithiopyr	90.9	88.5	P/P	49 - 123
2298468	EPTC	47.7	58.6	P/P	18 - 85.0
2298468	Ethion	79.7	79.6	P/P	10 - 131
2298468	Ethoprop	77.1	69.0	P/P	65 - 129
2298468	Etridiazole	57.4	61.5	P/P	50 - 150
2298468	Fenamiphos	88.9	84.3	P/P	34 - 130
2298468	Fenbuconazole	127	119	P/P	57 - 160
2298468	Fipronil	93.9	91.6	P/P	62 - 132
2298468	Fipronil Desulfinyl	87.0	85.4	P/P	57 - 131
2298468	Fipronil Sulfide	74.8	74.1	P/P	48 - 122
2298468	Fipronil Sulfone	72.9	73.2	P/P	44 - 122
2298468	Fluazifop-P-butyl	89.8	92.6	P/P	54 - 133
2298468	Fludioxonil	78.7	75.3	P/P	58 - 127
2298468	Flumioxazin	202	201	P/P	33 - 300
2298468	Flutolanil	66.5	67.9	P/P	42 - 130
2298468	Fluxapyroxad	122	112	P/P	23 - 141
2298468	Fonofos	75.3	69.8	P/P	58 - 119
2298468	Hexazinone	85.7	81.2	P/P	66 - 129
2298468	Imazalil	73.9	80.8	P/P	10 - 211
2298468	Iprodione	43.5	39.5	P/P	38 - 140
2298468	Loratadine	76.3	65.7	P/P	50 - 150
2298468	Malathion	83.8	93.7	P/P	57 - 138
2298468	Metolachlor	81.9	85.7	P/P	55 - 122
2298468	Metribuzin	80.3	77.7	P/P	38 - 187
2298468	Mevinphos	57.4	43.9	P/F	54 - 134
2298468	Molinate	65.3	68.9	P/P	41 - 97.0
2298468	Myclobutanil	82.8	78.5	P/P	56 - 125
2298468	Naled	78.4	84.9	P/P	10 - 108
2298468	Napropamide	78.3	79.1	P/P	50 - 150

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P408428

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2298468	Oxadiazon	71.9	72.6	P/P	40 - 119
2298468	Oxyfluorfen	102	103	P/P	61 - 153
2298468	Parathion Ethyl	80.7	79.2	P/P	59 - 130
2298468	Parathion Methyl	103	90.5	P/P	65 - 155
2298468	Pendimethalin	67.0	63.3	P/P	49 - 138
2298468	Phenytol	70.2	63.0	P/P	50 - 200
2298468	Phorate	57.2	57.3	P/P	42 - 140
2298468	Prodiamine	111	104	P/P	10 - 155
2298468	Prometon	116	110	P/P	56 - 129
2298468	Prometryn	93.2	88.4	P/P	55 - 134
2298468	Pronamide	96.3	86.2	P/P	66 - 137
2298468	Propanil	76.4	73.8	P/P	50 - 150
2298468	Propargite	116	116	P/P	50 - 200
2298468	Propiconazole	94.3	91.0	P/P	36 - 150
2298468	Pyraflufen Ethyl	99.4	99.0	P/P	50 - 150
2298468	Pyriproxyfen	39.8	37.7	P/P	10 - 165
2298468	Stirophos	70.4	72.0	P/P	50 - 150
2298468	Sulfentrazone	91.3	80.6	P/P	34 - 140
2298468	Tebuconazole	102	97.3	P/P	10 - 112
2298468	Terbufos	91.5	90.5	P/P	59 - 138
2298468	Terbutylazine	81.9	84.1	P/P	68 - 119
2298468	Thiobencarb	80.9	80.4	P/P	50 - 150
2298468	Triadimefon	69.0	70.1	P/P	50 - 150

Reference Method: EPA 8321B

Batch ID: P408581

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299564	2,4-D	132	98.7	P/P	40 - 150
2299564	2,4,5-T	80.5	88.5	P/P	40 - 150
2299564	Acetaminophen	111	115	P/P	30 - 150
2299564	Acetamiprid	114	102	P/P	40 - 150
2299564	Afidopyropen	75.5	65.6	P/P	40 - 150
2299564	Benzovindiflupyr	96.5	117	P/P	40 - 150
2299564	Carbamazepine	102	109	P/P	40 - 150
2299564	Clothianidin	166	183	F/F	40 - 150
2299564	Dinotefuran	128	141	P/P	40 - 150
2299564	Diuron	86.2	68.9	P/P	40 - 150
2299564	Fenuron	86.1	99.7	P/P	40 - 150
2299564	Fluridone	74.0	95.1	P/P	40 - 150
2299564	Hydrocodone	97.3	106	P/P	40 - 150
2299564	Ibuprofen	59.7	80.1	P/P	40 - 150
2299564	Imazapyr	66.2	95.9	P/P	40 - 150
2299564	Imidacloprid	188	203	F/F	40 - 150
2299564	Linuron	93.8	77.9	P/P	40 - 150
2299564	Mandestrobin	100	98.9	P/P	40 - 150
2299564	MCCP	111	98.9	P/P	40 - 150
2299564	Naproxen	57.6	47.3	P/P	40 - 150
2299564	Primidone	108	72.8	P/P	40 - 150
2299564	Pyraclostrobin	80.0	83.3	P/P	40 - 150
2299564	Silvex	64.6	81.9	P/P	40 - 150
2299564	Thiamethoxam	184	186	F/F	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P408581

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299564	Tolfenpyrad	50.5	42.9	P/P	30 - 150
2299564	Triclopyr	106	98.8	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P408582

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299564	Acesulfame K	145	139	P/P	40 - 150
2299564	AMPA	148	154	P/F	40 - 150
2299564	Endothall	162	163	F/F	40 - 150
2299564	Glufosinate	140	146	P/P	40 - 150
2299564	Glyphosate	143	141	P/P	40 - 150
2299564	Sucralose	127	153	P/F	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P408613

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299472	Fluoride	98.2	98.2	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P408958

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2298793	Organic Carbon	92.9	92.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P408515

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299634	Turbidity	0.995	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P408711

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299995	Calcium	1.52	Spike	P	0 - 20
2299995	Iron	1.25	Spike	P	0 - 20
2299995	Magnesium	1.40	Spike	P	0 - 20
2299995	Potassium	0.0952	Spike	P	0 - 20
2299995	Sodium	0.434	Spike	P	0 - 20
2299995	Strontium	0.761	Spike	P	0 - 20
2299995	Tin	0.152	Spike	P	0 - 20
2299995	Titanium	0.292	Spike	P	0 - 20
2299995	Vanadium	0.0282	Spike	P	0 - 20
2299995	Zinc	0.728	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P408711

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299995	Aluminum	0.00639	Spike	P	0 - 20
2299995	Antimony	2.74	Spike	P	0 - 20
2299995	Arsenic	1.84	Spike	P	0 - 20
2299995	Barium	1.61	Spike	P	0 - 20
2299995	Beryllium	5.02	Spike	P	0 - 20
2299995	Boron	1.88	Spike	P	0 - 20
2299995	Cadmium	3.05	Spike	P	0 - 20
2299995	Chromium	1.93	Spike	P	0 - 20
2299995	Cobalt	2.77	Spike	P	0 - 20
2299995	Copper	2.53	Spike	P	0 - 20
2299995	Lead	0.764	Spike	P	0 - 20
2299995	Manganese	2.06	Spike	P	0 - 20
2299995	Molybdenum	2.12	Spike	P	0 - 20
2299995	Nickel	2.27	Spike	P	0 - 20
2299995	Selenium	1.75	Spike	P	0 - 20
2299995	Silver	3.30	Spike	P	0 - 20
2299995	Thallium	0.293	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409186

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299471	Chloride	0.444	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P409227

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299673	Ammonia-N	0.336	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P408849

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299446	Kjeldahl Nitrogen	0.937	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P408681

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299638	NO2NO3-N	0.173	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P408651

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299637	Total-P	1.30	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P408507

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299641	O-Phosphate-P	0.926	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P408428

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298468	Acetochlor	8.41	Spike	P	0 - 24
2298468	Alachlor	20.2	Spike	P	0 - 24
2298468	Ametryn	8.87	Spike	P	0 - 27
2298468	Atrazine	2.16	Spike	P	0 - 29
2298468	Atrazine Desethyl	0.488	Spike	P	0 - 30
2298468	Azinphos Methyl	16.3	Spike	P	0 - 50
2298468	Azoxystrobin	3.91	Spike	P	0 - 32
2298468	Bromacil	3.07	Spike	P	0 - 30
2298468	Butylate	7.60	Spike	P	0 - 47
2298468	Caffeine	27.7	Spike	P	0 - 60
2298468	Carbophenothion	4.48	Spike	P	0 - 24
2298468	Carfentrazone Ethyl	3.18	Spike	P	0 - 26
2298468	Chlorfenapyr	9.34	Spike	P	0 - 30
2298468	Chlorpyrifos Ethyl	1.20	Spike	P	0 - 27
2298468	Chlorpyrifos Methyl	6.66	Spike	P	0 - 22
2298468	Coumaphos	2.81	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P408428

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298468	Cyanazine	5.08	Spike	P	0 - 32
2298468	Cyprodinil	9.05	Spike	P	0 - 30
2298468	Demeton	3.86	Spike	P	0 - 25
2298468	Diazinon	1.36	Spike	P	0 - 24
2298468	Difenoconazole	1.88	Spike	P	0 - 25
2298468	Dimethenamid	4.49	Spike	P	0 - 30
2298468	Dimethomorph	7.04	Spike	P	0 - 30
2298468	Disulfoton	9.27	Spike	P	0 - 26
2298468	Dithiopyr	2.68	Spike	P	0 - 22
2298468	EPTC	20.4	Spike	P	0 - 38
2298468	Ethion	0.125	Spike	P	0 - 47
2298468	Ethoprop	11.2	Spike	P	0 - 23
2298468	Etridiazole	6.88	Spike	P	0 - 30
2298468	Fenamiphos	5.30	Spike	P	0 - 34
2298468	Fenbuconazole	5.87	Spike	P	0 - 37
2298468	Fipronil	2.55	Spike	P	0 - 23
2298468	Fipronil Desulfinyl	1.88	Spike	P	0 - 26
2298468	Fipronil Sulfide	0.873	Spike	P	0 - 23
2298468	Fipronil Sulfone	0.481	Spike	P	0 - 24
2298468	Fluazifop-P-butyl	3.15	Spike	P	0 - 24
2298468	Fludioxonil	4.44	Spike	P	0 - 26
2298468	Flumioxazin	0.692	Spike	P	0 - 37
2298468	Flutolanil	2.06	Spike	P	0 - 26
2298468	Fluxapyroxad	8.48	Spike	P	0 - 34
2298468	Fonofos	7.63	Spike	P	0 - 22
2298468	Hexazinone	5.43	Spike	P	0 - 21
2298468	Imazalil	8.89	Spike	P	0 - 65
2298468	Iprodione	9.64	Spike	P	0 - 33
2298468	Loratadine	15.0	Spike	P	0 - 30
2298468	Malathion	11.1	Spike	P	0 - 26
2298468	Metalaxyl	3.52	Spike	P	0 - 38
2298468	Metolachlor	4.64	Spike	P	0 - 36
2298468	Metribuzin	3.28	Spike	P	0 - 29
2298468	Mevinphos	26.7	Spike	F	0 - 26
2298468	Molinate	5.40	Spike	P	0 - 27
2298468	Myclobutanil	5.35	Spike	P	0 - 21
2298468	Naled	7.91	Spike	P	0 - 26
2298468	Napropamide	1.04	Spike	P	0 - 30
2298468	Norflurazon	17.6	Spike	P	0 - 24
2298468	Oxadiazon	0.862	Spike	P	0 - 23
2298468	Oxyfluorfen	0.447	Spike	P	0 - 24
2298468	Parathion Ethyl	1.86	Spike	P	0 - 23
2298468	Parathion Methyl	12.7	Spike	P	0 - 23
2298468	Pendimethalin	5.59	Spike	P	0 - 31
2298468	Phenytoin	10.7	Spike	P	0 - 30
2298468	Phorate	0.161	Spike	P	0 - 27
2298468	Prodiamine	6.35	Spike	P	0 - 52
2298468	Prometon	5.52	Spike	P	0 - 31
2298468	Prometryn	5.39	Spike	P	0 - 24
2298468	Pronamide	11.0	Spike	P	0 - 26
2298468	Propanil	3.47	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P408428

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298468	Propargite	0.118	Spike	P	0 - 30
2298468	Propiconazole	3.53	Spike	P	0 - 31
2298468	Pyraflufen Ethyl	0.406	Spike	P	0 - 30
2298468	Pyridaben	8.44	Spike	P	0 - 30
2298468	Pyriproxyfen	5.48	Spike	P	0 - 50
2298468	Simazine	3.98	Spike	P	0 - 25
2298468	Stiropfos	2.28	Spike	P	0 - 30
2298468	Sulfentrazone	12.5	Spike	P	0 - 33
2298468	Tebuconazole	4.73	Spike	P	0 - 43
2298468	Terbufos	1.05	Spike	P	0 - 22
2298468	Terbuthylazine	2.61	Spike	P	0 - 24
2298468	Thiobencarb	0.681	Spike	P	0 - 30
2298468	Triadimefon	1.55	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P408581

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299564	2,4-D	28.9	Spike	P	0 - 30
2299564	2,4,5-T	9.39	Spike	P	0 - 30
2299564	Acetaminophen	3.65	Spike	P	0 - 30
2299564	Acetamiprid	11.1	Spike	P	0 - 30
2299564	Afidopyropen	14.1	Spike	P	0 - 30
2299564	Bentazon	6.76	Spike	P	0 - 30
2299564	Benzovindiflupyr	19.4	Spike	P	0 - 30
2299564	Carbamazepine	6.72	Spike	P	0 - 30
2299564	Clothianidin	9.47	Spike	P	0 - 30
2299564	Dinotefuran	9.41	Spike	P	0 - 30
2299564	Diuron	22.3	Spike	P	0 - 30
2299564	Fenuron	14.6	Spike	P	0 - 30
2299564	Fluridone	15.1	Spike	P	0 - 30
2299564	Hydrocodone	8.23	Spike	P	0 - 30
2299564	Ibuprofen	29.1	Spike	P	0 - 30
2299564	Imazapyr	18.3	Spike	P	0 - 30
2299564	Imidacloprid	7.77	Spike	P	0 - 30
2299564	Linuron	18.6	Spike	P	0 - 30
2299564	Mandestrobin	1.28	Spike	P	0 - 30
2299564	MCP	11.6	Spike	P	0 - 30
2299564	Naproxen	19.6	Spike	P	0 - 30
2299564	Primidone	36.5	Spike	F	0 - 30
2299564	Pyraclostrobin	4.10	Spike	P	0 - 30
2299564	Silvex	23.7	Spike	P	0 - 30
2299564	Thiamethoxam	1.01	Spike	P	0 - 30
2299564	Tolfenpyrad	16.3	Spike	P	0 - 30
2299564	Triclopyr	7.17	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B

Batch ID: P408582

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299564	Acesulfame K	4.14	Spike	P	0 - 30
2299564	AMPA	4.30	Spike	P	0 - 30
2299564	Endothall	0.858	Spike	P	0 - 30
2299564	Glufosinate	4.15	Spike	P	0 - 30
2299564	Glyphosate	1.31	Spike	P	0 - 30
2299564	Sucralose	16.1	Spike	P	0 - 30

Reference Method: SM 2120 B-2011

Batch ID: P408518

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299633	Color (true)	1.84	Sample	P	0 - 20

Reference Method: SM 2320 B-2011

Batch ID: P408610

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299472	Total Alkalinity	1.38	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011

Batch ID: P408978

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299607	TDS	7.79	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011

Batch ID: P408613

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299472	Fluoride	0.0	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011

Batch ID: P408958

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298793	Organic Carbon	0.461	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2299677
Field Sample ID: G4CE0206

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	111	P	30 - 160
EPA 8321B	Acetaminophen-d4	108	P	30 - 160
EPA 8321B	Carbamazepine-d10	97.2	P	30 - 160
EPA 8321B	Diuron-d6	77.8	P	30 - 160
EPA 8321B	Endothall-d6	148	P	30 - 160
EPA 8321B	Endothall-d6	148	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	142	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	142	P	30 - 160
EPA 8321B	Ibuprofen-d3	77.0	P	30 - 160
EPA 8321B	Primidone-d5	63.5	P	30 - 160
EPA 8321B	Sucralose-d6	94.8	P	30 - 160
EPA 8321B	Sucralose-d6	94.8	P	30 - 160

Lab Sample ID: 2299678
Field Sample ID: G3CE0055

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	137	P	30 - 160
EPA 8321B	Acetaminophen-d4	103	P	30 - 160
EPA 8321B	Carbamazepine-d10	108	P	30 - 160
EPA 8321B	Diuron-d6	81.3	P	30 - 160
EPA 8321B	Endothall-d6	109	P	30 - 160
EPA 8321B	Endothall-d6	109	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	62.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	62.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	106	P	30 - 160
EPA 8321B	Primidone-d5	103	P	30 - 160
EPA 8321B	Sucralose-d6	142	P	30 - 160
EPA 8321B	Sucralose-d6	142	P	30 - 160

Lab Sample ID: 2299680
Field Sample ID: G4CE0206

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	60.3	P	20 - 200
EPA 8270E	Simazine-d10	109	P	71 - 140
EPA 8270E	Terbufos-d10	85.2	P	62 - 131

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A109853

Included Lab Sample IDs: 2299674

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.1	99.1	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A109856

Included Lab Sample IDs: 2299672

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	98.5	P/P	95 - 105

Reference Method: SM 2120 B-2011

Run ID: A109857

Included Lab Sample IDs: 2299672

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	102	P/P	85 - 115

Reference Method: SM 2320 B-2011

Run ID: A109907

Included Lab Sample IDs: 2299672

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.7	96.4	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A109907

Included Lab Sample IDs: 2299672

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

Reference Method: EPA 8321B

Run ID: A109919

Included Lab Sample IDs: 2299677, 2299678

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	119	123	P/P	60 - 160
Acesulfame K	123	119	P/P	60 - 160
Endothall	80.5	89.8	P/P	60 - 160
Endothall	89.8	80.8	P/P	60 - 160
Sucralose	104	93.1	P/P	60 - 160
Sucralose	91.1	107	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A109920

Included Lab Sample IDs: 2299677, 2299678

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	135	138	P/P	50 - 150
2,4-D	138	117	P/P	50 - 150
2,4,5-T	106	95.0	P/P	50 - 150
2,4,5-T	95.0	98.2	P/P	50 - 150

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8321B

Run ID: A109920

Included Lab Sample IDs: 2299677, 2299678

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	73.1	76.1	P/P	60 - 160
Acetaminophen	76.1	79.9	P/P	60 - 160
Acetamiprid	92.5	99.3	P/P	50 - 150
Acetamiprid	98.1	92.5	P/P	50 - 150
Afidopyropen	122	75.7	P/P	50 - 150
Afidopyropen	75.7	98.7	P/P	50 - 150
Bentazon	107	80.7	P/P	50 - 160
Bentazon	80.7	94.9	P/P	50 - 160
Benzovindiflupyr	113	95.2	P/P	50 - 150
Benzovindiflupyr	95.2	116	P/P	50 - 150
Carbamazepine	95.8	92.8	P/P	60 - 150
Carbamazepine	98.9	95.8	P/P	60 - 150
Clothianidin	119	119	P/P	60 - 150
Clothianidin	119	100	P/P	60 - 150
Dinotefuran	101	106	P/P	50 - 150
Dinotefuran	106	96.8	P/P	50 - 150
Diuron	101	90.3	P/P	60 - 160
Diuron	90.3	89.7	P/P	60 - 160
Fenuron	103	101	P/P	60 - 150
Fenuron	96.2	103	P/P	60 - 150
Fluridone	83.8	84.3	P/P	60 - 160
Fluridone	84.3	111	P/P	60 - 160
Hydrocodone	101	94.5	P/P	60 - 150
Hydrocodone	94.5	94.9	P/P	60 - 150
Ibuprofen	144	69.4	P/P	50 - 160
Ibuprofen	69.4	69.2	P/P	50 - 160
Imazapyr	114	107	P/P	50 - 150
Imazapyr	96.1	114	P/P	50 - 150
Imidacloprid	104	92.9	P/P	60 - 150
Imidacloprid	92.9	82.2	P/P	60 - 150
Linuron	120	105	P/P	60 - 150
Linuron	96.6	120	P/P	60 - 150
Mandestrobin	112	114	P/P	50 - 150
Mandestrobin	114	109	P/P	50 - 150
MCPP	102	95.3	P/P	50 - 150
MCPP	84.3	102	P/P	50 - 150
Naproxen	74.7	64.8	P/P	50 - 160
Naproxen	83.3	74.7	P/P	50 - 160
Primidone	106	83.4	P/P	60 - 150
Primidone	83.4	66.0	P/P	60 - 150
Pyraclostrobin	107	98.7	P/P	60 - 150
Pyraclostrobin	110	107	P/P	60 - 150
Silvex	104	114	P/P	50 - 150
Silvex	109	104	P/P	50 - 150
Thiamethoxam	106	111	P/P	50 - 150
Thiamethoxam	106	106	P/P	50 - 150
Tolfenpyrad	80.2	74.8	P/P	60 - 150
Tolfenpyrad	88.0	80.2	P/P	60 - 150
Triclopyr	120	132	P/P	50 - 150
Triclopyr	132	121	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A109923

Included Lab Sample IDs: 2299673

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	104	102	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A109941

Included Lab Sample IDs: 2299677, 2299678

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	99.7	96.5	P/P	60 - 160
AMPA	99.8	99.0	P/P	60 - 160
Glufosinate	105	91.6	P/P	60 - 160
Glufosinate	97.8	100	P/P	60 - 160
Glyphosate	103	88.6	P/P	60 - 160
Glyphosate	94.0	84.2	P/P	60 - 160

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A109953

Included Lab Sample IDs: 2299679

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.0	99.7	P/P	90 - 110
Antimony	101	101	P/P	90 - 110
Arsenic	99.5	102	P/P	90 - 110
Barium	101	101	P/P	90 - 110
Beryllium	101	101	P/P	90 - 110
Boron	97.0	96.9	P/P	90 - 110
Cadmium	100	100	P/P	90 - 110
Chromium	100	101	P/P	90 - 110
Cobalt	94.5	96.2	P/P	90 - 110
Copper	96.3	99.1	P/P	90 - 110
Lead	92.0	92.2	P/P	90 - 110
Manganese	100	101	P/P	90 - 110
Molybdenum	98.6	99.3	P/P	90 - 110
Nickel	97.0	98.9	P/P	90 - 110
Selenium	100	101	P/P	90 - 110
Silver	99.0	99.0	P/P	90 - 110
Thallium	103	103	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A110001

Included Lab Sample IDs: 2299679

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	100	102	P/P	90 - 110
Iron	101	103	P/P	90 - 110
Magnesium	100	102	P/P	90 - 110
Potassium	99.1	99.2	P/P	90 - 110
Sodium	102	102	P/P	90 - 110
Strontium	105	105	P/P	90 - 110
Tin	101	103	P/P	90 - 110
Titanium	99.4	103	P/P	90 - 110
Vanadium	101	102	P/P	90 - 110

Quality Assurance Report

Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A110001

Included Lab Sample IDs: 2299679

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A110004

Included Lab Sample IDs: 2299673

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	105	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A110005

Included Lab Sample IDs: 2299680

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	105		P	80 - 120
Alachlor	102		P	80 - 120
Ametryn	117		P	80 - 120
Atrazine Desethyl	106		P	80 - 120
Azinphos Methyl	109		P	80 - 120
Azoxystrobin	102		P	80 - 120
Bromacil	108		P	80 - 120
Butylate	105		P	80 - 120
Caffeine	103		P	80 - 120
Carbophenothion	81.6		P	80 - 120
Carfentrazone Ethyl	95.0		P	80 - 120
Chlorfenapyr	88.2		P	80 - 120
Chlorpyrifos Ethyl	87.1		P	80 - 120
Chlorpyrifos Methyl	86.5		P	80 - 120
Coumaphos	85.7		P	80 - 120
Cyanazine	113		P	80 - 120
Cyprodinil	110		P	80 - 120
Demeton	86.9		P	80 - 120
Diazinon	112		P	80 - 120
Difenoconazole	105		P	80 - 120
Dimethenamid	106		P	80 - 120
Dimethomorph	103		P	80 - 120
Disulfoton	88.8		P	80 - 120
Dithiopyr	105		P	80 - 120
EPTC	100		P	80 - 120
Ethion	89.3		P	80 - 120
Ethoprop	104		P	80 - 120
Etridiazole	106		P	80 - 120
Fenamiphos	87.1		P	80 - 120
Fenbuconazole	99.1		P	80 - 120
Fipronil	103		P	80 - 120
Fipronil Desulfinyl	101		P	80 - 120
Fipronil Sulfide	86.8		P	80 - 120
Fipronil Sulfone	82.2		P	80 - 120
Fluazifop-P-butyl	105		P	80 - 120
Fludioxonil	107		P	80 - 120
Flumioxazin	97.4		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A110005
Included Lab Sample IDs: 2299680

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Flutolanil	86.6		P	80 - 120
Fluxapyroxad	101		P	80 - 120
Fonofos	102		P	80 - 120
Hexazinone	104		P	80 - 120
Imazalil	100		P	80 - 120
Iprodione	102		P	80 - 120
Loratadine	109		P	80 - 120
Metalaxyl	103		P	80 - 120
Metolachlor	104		P	80 - 120
Metribuzin	107		P	80 - 120
Mevinphos	95.7		P	80 - 120
Molinate	101		P	80 - 120
Myclobutanil	107		P	80 - 120
Naled	90.4		P	80 - 120
Napropamide	103		P	80 - 120
Norflurazon	97.8		P	80 - 120
Oxadiazon	107		P	80 - 120
Oxyfluorfen	105		P	80 - 120
Parathion Ethyl	104		P	80 - 120
Parathion Methyl	102		P	80 - 120
Pendimethalin	107		P	80 - 120
Phenytoin	107		P	80 - 120
Phorate	91.3		P	80 - 120
Prodiamine	103		P	80 - 120
Prometon	113		P	80 - 120
Prometryn	109		P	80 - 120
Pronamide	104		P	80 - 120
Propanil	92.1		P	80 - 120
Propargite	102		P	80 - 120
Propiconazole	101		P	80 - 120
Pyraflufen Ethyl	97.9		P	80 - 120
Pyridaben	103		P	80 - 120
Pyriproxyfen	110		P	80 - 120
Simazine	96.8		P	80 - 120
Stiophos	80.0		P	80 - 120
Sulfentrazone	101		P	80 - 120
Tebuconazole	103		P	80 - 120
Terbufos	94.8		P	80 - 120
Terbuthylazine	101		P	80 - 120
Thiobencarb	106		P	80 - 120
Triadimefon	112		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A110025
Included Lab Sample IDs: 2299673

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.7	98.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A110037
Included Lab Sample IDs: 2299680

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	101		P	80 - 120
Malathion	95.6		P	80 - 120

Reference Method: SM 5310 B-2011
Run ID: A110041
Included Lab Sample IDs: 2299673

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.8	95.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A110134
Included Lab Sample IDs: 2299673

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	96.1	94.9	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A11040
Included Lab Sample IDs: 2299672

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	103	P/P	90 - 110
Sulfate	98.3	98.8	P/P	90 - 110

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						0.995	
EPA 200.7 Rev. 4.4	Calcium	106	101	108	105			1.52
	Iron	107	110	108	107			1.25
	Magnesium	106	104	108	106			1.40
	Potassium	104	106	104	104			0.0952
	Sodium	106	104	104	103			0.434
	Strontium	105	108	107	106			0.761
	Tin	107	110	109	109			0.152
	Titanium	107	111	109	109			0.292
	Vanadium	105	110	106	106			0.0282
	Zinc	104	107	105	104			0.728
EPA 200.8 Rev. 5.4	Aluminum	99.4	98.0	101	101			0.0063
	Antimony	100	103	101	98.7			2.74
	Arsenic	101	103	101	99.2			1.84
	Barium	104	106	107	104			1.61
	Beryllium	99.7	101	100	95.0			5.02
	Boron	94.1	98.4	97.8	95.7			1.88
	Cadmium	98.6	101	101	97.9			3.05
	Chromium	100	103	102	100			1.93
	Cobalt	98.1	98.0	99.0	96.3			2.77
	Copper	100	97.9	102	99.6			2.53
	Lead	94.1	95.4	95.9	95.2			0.764
	Manganese	99.2	101	104	101			2.06
	Molybdenum	101	103	101	99.0			2.12
	Nickel	101	99.1	102	99.9			2.27
	Selenium	98.8	99.5	98.9	97.2			1.75
	Silver	99.9	98.6	101	97.6			3.30
	Thallium	102	105	106	106			0.293
EPA 300.0 Rev. 2.1	Chloride	100	100	102			0.444	
	Sulfate	96.3	96.3	95.4				
EPA 350.1 Rev. 2.0	Ammonia-N	102	103	103				0.336
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100	109	107				0.937
EPA 353.2 Rev. 2.0	NO2NO3-N	102	97.5					0.173
EPA 365.1 Rev. 2.0	Total-P	109	107	109				1.30
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.3	96.7	97.6				0.926
EPA 8270E	Acetochlor	96.2	96.4	88.6				8.41
	Alachlor	85.4	101	82.5				20.2
	Ametryn	102	107	98.4				8.87
	Atrazine	87.9	81.3	79.0				2.16
	Atrazine Desethyl	45.1	36.9	36.7				0.488
	Azinphos Methyl	87.6	83.8	71.2				16.3
	Azoxystrobin	98.7	98.6	94.8				3.91
	Bromacil	70.8						3.07
	Butylate	60.1	57.6	62.2				7.60
	Caffeine	103	149	113				27.7
	Carbophenothion	100	78.2	81.8				4.48
	Carfentrazone Ethyl	95.0	87.1	84.4				3.18
	Chlorfenapyr	82.6	68.3	75.0				9.34
	Chlorpyrifos Ethyl	95.5	72.8	71.9				1.20
	Chlorpyrifos Methyl	91.2	76.9	72.0				6.66
	Coumaphos	155	133	137				2.81
	Cyanazine	97.9	99.7	94.8				5.08
	Cyprodinil	103	88.7	97.1				9.05
	Demeton	69.0	64.7	62.2				3.86

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8270E	Diazinon	98.5	97.2	98.5		1.36
	Difenoconazole	78.1	67.9	66.6		1.88
	Dimethenamid	76.8	75.9	72.5		4.49
	Dimethomorph	101	86.0	80.2		7.04
	Disulfoton	86.1	80.1	73.0		9.27
	Dithiopyr	89.9	90.9	88.5		2.68
	EPTC	55.0	47.7	58.6		20.4
	Ethion	90.9	79.7	79.6		0.125
	Ethoprop	72.2	77.1	69.0		11.2
	Etridiazole	57.9	57.4	61.5		6.88
	Fenamiphos	96.3	88.9	84.3		5.30
	Fenbuconazole	135	127	119		5.87
	Fipronil	92.9	93.9	91.6		2.55
	Fipronil Desulfinyl	90.5	87.0	85.4		1.88
	Fipronil Sulfide	85.2	74.8	74.1		0.873
	Fipronil Sulfone	81.1	72.9	73.2		0.481
	Fluazifop-P-butyl	90.6	89.8	92.6		3.15
	Fludioxonil	85.4	78.7	75.3		4.44
	Flumioxazin	217	202	201		0.692
	Flutolanil	72.5	66.5	67.9		2.06
	Fluxapyroxad	125	122	112		8.48
	Fonofos	85.3	75.3	69.8		7.63
	Hexazinone	90.6	85.7	81.2		5.43
	Imazalil	90.9	73.9	80.8		8.89
	Iprodione	53.7	43.5	39.5		9.64
	Loratadine	83.0	76.3	65.7		15.0
	Malathion	93.6	83.8	93.7		11.1
	Metalaxyl	81.7				3.52
	Metolachlor	91.4	81.9	85.7		4.64
	Metribuzin	87.3	80.3	77.7		3.28
	Mevinphos	47.6	57.4	43.9		26.7
	Molinate	69.3	65.3	68.9		5.40
	Myclobutanil	84.3	82.8	78.5		5.35
	Naled	87.5	78.4	84.9		7.91
	Napropamide	86.6	78.3	79.1		1.04
	Norflurazon	91.7				17.6
	Oxadiazon	76.2	71.9	72.6		0.862
	Oxyfluorfen	95.8	102	103		0.447
	Parathion Ethyl	88.2	80.7	79.2		1.86
	Parathion Methyl	105	103	90.5		12.7
	Pendimethalin	73.5	67.0	63.3		5.59
	Phenytoin	65.7	70.2	63.0		10.7
	Phorate	52.7	57.2	57.3		0.161
	Prodiamine	89.9	111	104		6.35
	Prometon	113	116	110		5.52
	Prometryn	92.0	93.2	88.4		5.39
	Pronamide	89.7	96.3	86.2		11.0
	Propanil	72.4	76.4	73.8		3.47
	Propargite	116	116	116		0.118
	Propiconazole	99.0	94.3	91.0		3.53
	Pyraflufen Ethyl	106	99.4	99.0		0.406
	Pyridaben	171				8.44
	Pyriproxyfen	44.9	39.8	37.7		5.48
	Simazine	82.3				3.98

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Stirophos	89.3	70.4	72.0			2.28
	Sulfentrazone	91.0	91.3	80.6			12.5
	Tebuconazole	110	102	97.3			4.73
	Terbufos	96.6	91.5	90.5			1.05
	Terbutylazine	86.1	81.9	84.1			2.61
	Thiobencarb	88.4	80.9	80.4			0.681
	Triadimefon	86.7	69.0	70.1			1.55
EPA 8321B	2,4-D	114	132	98.7			28.9
	2,4,5-T	106	80.5	88.5			9.39
	Acesulfame K	101	145	139			4.14
	Acetaminophen	85.5	115	111			3.65
	Acetamiprid	96.7	102	114			11.1
	Afidopyropen	80.4	65.6	75.5			14.1
	AMPA	137	148	154			4.30
	Bentazon	81.0					6.76
	Benzovindiflupyr	117	96.5	117			19.4
	Carbamazepine	112	109	102			6.72
	Clothianidin	92.7	183	166			9.47
	Dinotefuran	105	141	128			9.41
	Diuron	82.3	68.9	86.2			22.3
	Endothall	106	162	163			0.858
	Fenuron	100	99.7	86.1			14.6
	Fluridone	73.4	74.0	95.1			15.1
	Glufosinate	139	140	146			4.15
	Glyphosate	130	143	141			1.31
	Hydrocodone	86.4	106	97.3			8.23
	Ibuprofen	145	59.7	80.1			29.1
	Imazapyr	104	66.2	95.9			18.3
	Imidacloprid	79.9	203	188			7.77
	Linuron	91.7	93.8	77.9			18.6
	Mandestrobin	114	100	98.9			1.28
	MCPP	102	111	98.9			11.6
	Naproxen	98.8	57.6	47.3			19.6
	Primidone	91.6	72.8	108			36.5
	Pyraclostrobin	89.6	80.0	83.3			4.10
	Silvex	75.6	64.6	81.9			23.7
	Sucralose	108	127	153			16.1
	Thiamethoxam	99.5	186	184			1.01
	Tolfenpyrad	51.7	50.5	42.9			16.3
	Triclopyr	126	106	98.8			7.17
SM 2120 B-2011	Color (true)	99.4				1.84	
SM 2320 B-2011	Total Alkalinity	98.9				1.38	
SM 2540 C-2011	TDS					7.79	
SM 4500 F-C-2011	Fluoride	97.9	98.2	98.2			0.0
SM 5310 B-2011	Organic Carbon	96.1	92.9	92.4			0.461

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2299672
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2299679

Reference Method Descriptions

Method	Description	Associated Samples
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2299679
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2299672
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2299672
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2299673
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2299673
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2299673
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2299673
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2299674
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2299680
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2299677, 2299678
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2299677, 2299678
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2299672
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2299672
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2299679
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2299672
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2299672
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2299672
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2299673

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	01/13/2022			01/13/2022 15:45	Khloe J Berg	2299672
EPA 200.7 Rev. 4.4	01/13/2022	01/20/2022 10:56	Emily M Philpot	01/21/2022 23:18	Josef B Mick	2299679
EPA 200.8 Rev. 5.4	01/13/2022	01/20/2022 10:56	Emily M Philpot	01/21/2022 02:28	McKinley C Carter	2299679
EPA 300.0 Rev. 2.1	01/13/2022			01/28/2022 17:43	James L Waggeberby	2299672
EPA 350.1 Rev. 2.0	01/13/2022			01/31/2022 11:47	Roberta Tatti	2299673
EPA 351.2 Rev. 2.0	01/13/2022	01/24/2022 11:42	Samantha L Bates	01/25/2022 11:13	Alexandra J Mattheus	2299673
EPA 353.2 Rev. 2.0	01/13/2022			01/19/2022 11:52	Beverly Y. Sanders	2299673
EPA 365.1 Rev. 2.0	01/13/2022	01/20/2022 17:50	Simonne.V. Calhoun	01/21/2022 13:10	Shengyu Ding	2299673
EPA 365.1 Rev. 2.0 dissolved	01/13/2022			01/13/2022 15:46	Ping Hua	2299674
EPA 8270E	01/13/2022	01/14/2022 08:00	Fe-Val Siddell	01/20/2022 20:15	Michael Poppell	2299680
	01/13/2022	01/14/2022 08:00	Fe-Val Siddell	01/25/2022 23:39	Michael Poppell	2299680
	01/13/2022	01/14/2022 08:00	Fe-Val Siddell	01/26/2022 00:04	Michael Poppell	2299680
EPA 8321B	01/13/2022	01/18/2022 12:00	Juyoung Kim	01/18/2022 15:12	Juyoung Kim	2299677
	01/13/2022	01/18/2022 12:00	Juyoung Kim	01/18/2022 19:16	Manjita Shrestha	2299677
	01/13/2022	01/18/2022 12:00	Juyoung Kim	01/18/2022 19:46	Manjita Shrestha	2299678
	01/13/2022	01/18/2022 12:00	Juyoung Kim	01/19/2022 12:24	Manjita Shrestha	2299677
	01/13/2022	01/18/2022 14:30	Juyoung Kim	01/18/2022 19:08	Juyoung Kim	2299678
	01/13/2022	01/18/2022 14:30	Juyoung Kim	01/18/2022 19:46	Manjita Shrestha	2299678
	01/13/2022	01/19/2022 09:00	Hoor Shaik	01/20/2022 07:29	Juyoung Kim	2299677
	01/13/2022	01/19/2022 09:00	Hoor Shaik	01/20/2022 08:38	Juyoung Kim	2299678
SM 2120 B-2011	01/13/2022			01/13/2022 16:55	Sarah A Nixon	2299672
SM 2320 B-2011	01/13/2022			01/15/2022 03:37	Dale L. Simmons	2299672
SM 2340B	01/13/2022			01/21/2022 23:18	Josef B Mick	2299679
SM 2540 C-2011	01/13/2022			01/18/2022 15:32	Yijie Li	2299672
SM 2540 D-2011	01/13/2022			01/18/2022 15:32	Yijie Li	2299672
SM 4500 F-C-2011	01/13/2022			01/15/2022 03:37	Dale L. Simmons	2299672
SM 5310 B-2011	01/13/2022			01/25/2022 03:07	Nathaniel J Jones	2299673