

Chemical Analysis Report

CEN-DIST-2022-06-15-02

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

Event Description: **Lake Cypress LVI**

Request ID: **RQ-2022-06-13-22**

Customer: **CEN-DIST**

Project ID: **SMP**

Send Reports to:

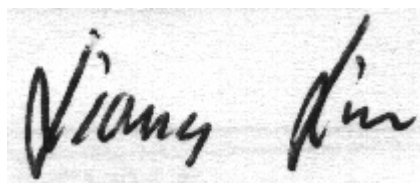
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
Attn: Matthew Bearden

For additional information please contact

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 07-JUL-2022 10:44

A handwritten signature in black ink, appearing to read "Liang Lin", is shown on a light-colored background.

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: Lake Harney, Center of Lake

Collection Date/Time: 06/14/2022 13:53

Field ID: G2CE0254

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2334833	DEP SOP: NU-094-1	Color (true)**	130	A	PCU	P415268	
	EPA 180.1 Rev. 2.0	Turbidity	2.1		NTU	P415259	
	EPA 300.0 Rev. 2.1	Chloride	270		mg Cl/L	P415804	
		Sulfate	55		mg SO4/L	P415806	
	SM 2320 B-2011	Total Alkalinity	62		mg CaCO3/L	P415749	
	SM 2540 C-2011	TDS	630		mg/L	P415658	
	SM 2540 D-2011	TSS	2	I	mg/L	P415650	
	SM 4500-F- C-2011	Fluoride	0.13		mg F/L	P415753	
2334834	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P415645	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P415619	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P415663	
	EPA 365.1 Rev. 2.0	Total-P	0.065		mg P/L	P415572	
	SM 5310 B-2011	Organic Carbon	21		mg C/L	P415475	
2334835	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.030		mg P/L	P415276	
2334837	EPA 8321B	2,4-D	0.017		ug/L	P415325	
		Acesulfame K	0.10	U	ug/L	P415240	
		2,4,5-T	0.0040	U	ug/L	P415325	
		AMPA	0.10	U	ug/L	P415240	
		Acetaminophen	0.0080	U	ug/L	P415325	
		Acetamiprid	0.0020	U	ug/L	P415325	
		Endothall	0.25	U	ug/L	P415240	
		Glufosinate	0.10	U	ug/L	P415240	
		Glyphosate	0.10	U	ug/L	P415240	
		Afidopyropen	0.0020	U	ug/L	P415325	
		Bentazon	0.012		ug/L	P415325	
		Sucralose	2.3		ug/L	P415240	
		Benzovindiflupyr	0.0020	U	ug/L	P415325	
		Carbamazepine	0.0034		ug/L	P415325	
		Clothianidin	0.0022	I	ug/L	P415325	
		Dinotefuran	0.0039	I	ug/L	P415325	
		Diuron	0.0021	I	ug/L	P415325	
		Fenuron	0.032	U	ug/L	P415325	
		Fluridone	0.017		ug/L	P415325	
		Imazapyr	0.14		ug/L	P415325	
		Hydrocodone	0.0020	U	ug/L	P415325	
		Ibuprofen	0.080	U	ug/L	P415325	
		Imidacloprid	0.0040	I	ug/L	P415325	
		Linuron	0.0040	U	ug/L	P415325	
		Mandestrobin	0.0020	U	ug/L	P415325	
		MCP	0.0040	U	ug/L	P415325	
		Naproxen	0.0080	U	ug/L	P415325	
		Primidone	0.0077	I	ug/L	P415325	
		Pyraclostrobin	0.0020	U	ug/L	P415325	

Field ID: G2CE0254

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2334837	EPA 8321B	Silvex	0.0040	U	ug/L	P415325	
		Thiamethoxam	0.0020	U	ug/L	P415325	
		Tolfenpyrad	0.0020	U	ug/L	P415325	
		Triclopyr	0.0040	U	ug/L	P415325	
2334838	EPA 200.7 Rev. 4.4	Calcium	48.5		mg/L	P415396	
		Iron	300		ug/L	P415396	
		Magnesium	19.3		mg/L	P415396	
		Potassium	6.0		mg/L	P415396	
		Sodium	152		mg/L	P415396	
		Strontium	1.31E+03		ug/L	P415515	
		Tin	3.0	U	ug/L	P415515	
		Titanium	0.75	U	ug/L	P415515	
		Vanadium	2.0	U	ug/L	P415515	
		Zinc	5.0	U	ug/L	P415515	
	EPA 200.8 Rev. 5.4	Aluminum	43		ug/L	P415396	
		Antimony	0.096	I	ug/L	P415396	
		Arsenic	0.72		ug/L	P415396	
		Barium	27.4		ug/L	P415396	
		Beryllium	0.010	U	ug/L	P415396	
		Boron**	71.2		ug/L	P415396	
		Cadmium	0.020	U	ug/L	P415396	
		Chromium	0.40	U	ug/L	P415396	
		Cobalt	0.132		ug/L	P415396	
		Copper	0.59	I	ug/L	P415396	
		Lead	0.20	U	ug/L	P415396	
		Manganese	6.56		ug/L	P415396	
2334839	SM 2340 B-2011	Molybdenum	0.74		ug/L	P415396	
		Nickel	0.50	U	ug/L	P415396	
		Selenium	0.20	U	ug/L	P415396	
		Silver	0.010	U	ug/L	P415396	
	EPA 8270E	Thallium	0.10	U	ug/L	P415396	
		Hardness	201		mg/L	P415396	
		Oxybenzone**	9.5	U	ng/L	P415327	
		Acetochlor	0.24	U	ng/L	P415327	
		Octinoxate**	31	I J	ng/L	P415327	LCS
		Alachlor	0.24	U	ng/L	P415327	
		Avobenzone**	95	U	ng/L	P415327	
		Ametryn	0.57	U	ng/L	P415327	
		Atrazine	40		ng/L	P415327	
		PBDE-47**	3.8	U	ng/L	P415327	
		Atrazine Desethyl	5.3	I	ng/L	P415327	
		PBDE-99**	4.7	U	ng/L	P415327	
		Azinphos Methyl	1.9	U	ng/L	P415327	
		Tri-o-cresyl Phosphate**	5.7	U	ng/L	P415327	
		Azoxystrobin**	0.59	I	ng/L	P415327	

Field ID: G2CE0254

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2334839	EPA 8270E	Bromacil	0.47	U	ng/L	P415327	RPD
		2-Ethylhexyl	11	U	ng/L	P415327	
		2,3,4,5-tetrabromobenzoate (EHTBB)**					
		Butylate	0.38	U	ng/L	P415327	
		Caffeine**	7.1	U	ng/L	P415327	
		Carbophenothion	0.19	U	ng/L	P415327	
		Carfentrazone Ethyl**	0.095	U	ng/L	P415327	
		Chlorfenapyr**	0.17	U	ng/L	P415327	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P415327	
		Chlorpyrifos Methyl	0.047	U	ng/L	P415327	
		Coumaphos**	0.47	U	ng/L	P415327	
		Cyanazine	3.1	U	ng/L	P415327	
		Cyprodinil**	0.095	U	ng/L	P415327	
		Demeton	1.4	U	ng/L	P415327	
		Diazinon	0.12	U	ng/L	P415327	
		Difenoconazole**	0.57	U	ng/L	P415327	
		Dimethenamid**	0.095	U	ng/L	P415327	
		Dimethomorph**	0.17	U	ng/L	P415327	
		Disulfoton	0.47	U	ng/L	P415327	
		Dithiopyr**	0.17	U	ng/L	P415327	
		EPTC	1.2	U	ng/L	P415327	
		Ethion	0.14	U	ng/L	P415327	
		Ethoprop	0.095	U	ng/L	P415327	
		Etridiazole**	0.14	U	ng/L	P415327	
		Fenamiphos	0.47	U	ng/L	P415327	
		Fenbuconazole**	0.12	U	ng/L	P415327	
		Fipronil	0.24	U	ng/L	P415327	
		Fipronil Desulfinyl**	0.28	I	ng/L	P415327	
		Fipronil Sulfide	0.14	U	ng/L	P415327	
		Fipronil Sulfone	0.30	I	ng/L	P415327	
		Fluazifop-P-butyl**	0.095	U	ng/L	P415327	
		Fludioxonil**	0.12	U	ng/L	P415327	
		Flumioxazin**	1.7	U	ng/L	P415327	
		Flutolanil**	0.095	U	ng/L	P415327	
		Fluxapyroxad**	0.11	I	ng/L	P415327	
		Fonofos	0.19	U	ng/L	P415327	
		Hexazinone	2.2		ng/L	P415327	
		Imazalil**	0.71	U	ng/L	P415327	
		Iprodione**	0.57	U	ng/L	P415327	
		Loratadine**	0.095	U	ng/L	P415327	
		Malathion	0.33	U	ng/L	P415327	
		Metaxyl	0.71	U	ng/L	P415327	
		Metolachlor	3.0		ng/L	P415327	
		Metribuzin	2.4	U	ng/L	P415327	
		Mevinphos	1.0	U	ng/L	P415327	

Field ID: G2CE0254

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2334839	EPA 8270E	Molinate	0.28	U	ng/L	P415327	
		Myclobutanil**	0.27	I	ng/L	P415327	
		Naled**	1.4	UJ	ng/L	P415327	LCS, MS
		Napropamide**	0.38	U	ng/L	P415327	
		Norflurazon	0.47	U	ng/L	P415327	
		Oxadiazon	0.44	I	ng/L	P415327	
		Oxyfluorfen**	0.14	U	ng/L	P415327	
		Parathion Ethyl	0.24	U	ng/L	P415327	
		Parathion Methyl	0.52	U	ng/L	P415327	
		Pendimethalin	0.95	U	ng/L	P415327	
		Phenytol**	3.3	U	ng/L	P415327	MS
		Phorate	0.50	U	ng/L	P415327	
		Prodiamine**	0.17	U	ng/L	P415327	
		Prometon	0.85	U	ng/L	P415327	
		Prometryn	0.19	U	ng/L	P415327	
		Pronamide**	0.14	U	ng/L	P415327	
		Propanil**	0.12	U	ng/L	P415327	
		Propargite**	1.4	U	ng/L	P415327	
		Propiconazole**	0.88	I	ng/L	P415327	
		Pyraflufen Ethyl**	0.24	U	ng/L	P415327	
		Pyridaben**	0.43	U	ng/L	P415327	
		Pyriproxyfen**	0.12	U	ng/L	P415327	
		Simazine	5.8		ng/L	P415327	
		Stirophos**	0.12	U	ng/L	P415327	MS
		Sulfentrazone**	0.84	I	ng/L	P415327	
		Tebuconazole**	0.47	U	ng/L	P415327	
		Terbufos	0.095	U	ng/L	P415327	
		Terbutylazine	0.40	U	ng/L	P415327	
		Thiobencarb**	0.57	U	ng/L	P415327	
		Triadimefon**	0.24	U	ng/L	P415327	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for barium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.

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.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P415268

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P415259

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P415396

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P415515

Component	Result	Code	Units
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: P415396

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P415804

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P415806

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415645

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P415619

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P415663

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P415572

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P415276

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

Reference Method: EPA 8270E
Batch ID: P415327

Component	Result	Code	Units
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	12	U	ng/L
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	12	U	ng/L
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P415327

Component	Result	Code	Units
Atrazine Desethyl	1.5	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Avobenzone	100	U	ng/L
Avobenzone	100	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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P415327

Component	Result	Code	Units
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
Loratadine	0.10	U	ng/L
Loratadine	0.10	U	ng/L
Malathion	0.35	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.75	U	ng/L
Metalaxyl	0.75	U	ng/L
Metolachlor	0.35	U	ng/L
Metolachlor	0.35	U	ng/L
Metribuzin	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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P415327

Component	Result	Code	Units
Octinoxate	20	U	ng/L
Octinoxate	20	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxybenzone	10	U	ng/L
Oxybenzone	10	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
PBDE-47	4.0	U	ng/L
PBDE-47	4.0	U	ng/L
PBDE-99	5.0	U	ng/L
PBDE-99	5.0	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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P415327

Component	Result	Code	Units
Terbutylazine	0.42	U	ng/L
Terbutylazine	0.42	U	ng/L
Thiobencarb	0.60	U	ng/L
Thiobencarb	0.60	U	ng/L
Tri-o-cresyl Phosphate	6.0	U	ng/L
Tri-o-cresyl Phosphate	6.0	U	ng/L
Triadimefon	0.25	U	ng/L
Triadimefon	0.25	U	ng/L

Reference Method: EPA 8321B

Batch ID: P415240

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: P415325

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	0.032	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.080	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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P415749

Component	Result	Code	Units
Total Alkalinity	1.0	U	mg CaCO ₃ /L

Reference Method: SM 2540 C-2011
Batch ID: P415658

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P415650

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P415753

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P415475

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: DEP SOP: NU-094-1
Batch ID: P415268

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	95.2		P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P415259

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	96.8		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P415396

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	106		P	80 - 120
Iron	104		P	80 - 120
Magnesium	102		P	80 - 120
Potassium	102		P	80 - 120
Sodium	104		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P415515

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Strontium	104		P	85 - 115
Tin	100		P	85 - 115
Titanium	103		P	85 - 115
Vanadium	95.2		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P415396

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	98.7		P	85 - 115
Antimony	97.9		P	85 - 115
Arsenic	99.4		P	85 - 115
Barium	102		P	85 - 115
Beryllium	94.6		P	85 - 115
Boron	106		P	85 - 115
Cadmium	96.7		P	85 - 115
Chromium	96.4		P	85 - 115
Cobalt	99.7		P	85 - 115
Copper	96.6		P	85 - 115
Lead	99.5		P	85 - 115
Manganese	97.4		P	85 - 115
Molybdenum	98.7		P	85 - 115
Nickel	98.4		P	85 - 115
Selenium	97.1		P	85 - 115
Silver	98.6		P	85 - 115
Thallium	99.7		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P415804

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	94.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P415806

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415645

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P415619

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P415663

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: P415572

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P415276

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

Reference Method: EPA 8270E
Batch ID: P415327

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	103		P	50 - 150
Acetochlor	97.6		P	70 - 121
Alachlor	92.5		P	68 - 119
Ametryn	97.4		P	64 - 139
Atrazine	100		P	76 - 120
Atrazine Desethyl	68.9		P	44 - 126
Avobenzone	103		P	76 - 212
Azinphos Methyl	127		P	43 - 192
Azoxystrobin	102		P	36 - 224
Bromacil	84.6		P	52 - 121

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P415327

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Butylate	67.8		P	28 - 91.0
Caffeine	87.9		P	50 - 134
Carbophenothion	100		P	56 - 129
Carfentrazone Ethyl	110		P	60 - 141
Chlorfenapyr	92.1		P	56 - 115
Chlorpyrifos Ethyl	100		P	60 - 118
Chlorpyrifos Methyl	101		P	68 - 119
Coumaphos	104		P	18 - 250
Cyanazine	129		P	61 - 250
Cyprodinil	96.0		P	55 - 145
Demeton	80.5		P	30 - 159
Diazinon	95.6		P	70 - 123
Difenoconazole	132		P	49 - 204
Dimethenamid	78.7		P	64 - 115
Dimethomorph	92.8		P	12 - 219
Disulfoton	81.8		P	44 - 125
Dithiopyr	88.0		P	64 - 115
EPTC	66.5		P	28 - 86.0
Ethion	96.3		P	33 - 125
Ethoprop	87.9		P	64 - 116
Etridiazole	69.1		P	34 - 91.0
Fenamiphos	101		P	12 - 127
Fenbuconazole	94.8		P	59 - 151
Fipronil	99.1		P	67 - 129
Fipronil Desulfinyl	106		P	65 - 127
Fipronil Sulfide	87.4		P	61 - 116
Fipronil Sulfone	93.0		P	55 - 117
Fluazifop-P-butyl	98.1		P	62 - 127
Fludioxonil	93.1		P	62 - 128
Flumioxazin	142		P	33 - 250
Flutolanil	95.3		P	56 - 127
Fluxapyroxad	77.7		P	45 - 128
Fonofos	90.5		P	62 - 111
Hexazinone	103		P	46 - 139
Imazalil	70.4		P	38 - 142
Iprodione	106		P	47 - 135
Loratadine	87.9		P	10 - 244
Malathion	105		P	61 - 139
Metalaxyl	95.4		P	10 - 119
Metolachlor	93.2		P	65 - 118
Metribuzin	94.6		P	51 - 250
Mevinphos	83.2		P	53 - 121
Molinate	75.8		P	42 - 96.0
Myclobutanil	95.6		P	55 - 128
Naled	113		F	10 - 98.0
Napropamide	85.7		P	49 - 121
Norflurazon	92.9		P	61 - 126
Octinoxate	206		F	30 - 159
Oxadiazon	80.4		P	59 - 116
Oxybenzone	78.7		P	61 - 139
Oxyfluorfen	129		P	64 - 137
Parathion Ethyl	105		P	70 - 112

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P415327

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Parathion Methyl	114		P	76 - 133
PBDE-47	90.9		P	50 - 150
PBDE-99	92.9		P	50 - 150
Pendimethalin	106		P	52 - 117
Phenytoin	64.9		P	10 - 199
Phorate	81.4		P	48 - 121
Prodiamine	56.4		P	26 - 142
Prometon	71.8		P	43 - 123
Prometryn	89.2		P	66 - 127
Pronamide	93.0		P	75 - 121
Propanil	93.6		P	45 - 150
Propargite	92.9		P	42 - 208
Propiconazole	90.0		P	60 - 125
Pyraflufen Ethyl	91.4		P	70 - 138
Pyridaben	96.9		P	35 - 245
Pyriproxyfen	93.1		P	30 - 149
Simazine	82.7		P	72 - 125
Stirophos	97.7		P	29 - 164
Sulfentrazone	93.8		P	21 - 139
Tebuconazole	77.8		P	10 - 115
Terbufos	106		P	60 - 123
Terbuthylazine	95.6		P	72 - 115
Thiobencarb	81.7		P	31 - 139
Tri-o-cresyl Phosphate	92.5		P	50 - 150
Triadimefon	92.1		P	65 - 116

Reference Method: EPA 8321B

Batch ID: P415240

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	104		P	40 - 150
AMPA	114		P	40 - 150
Endothall	102		P	40 - 150
Glufosinate	110		P	40 - 150
Glyphosate	115		P	40 - 150
Sucralose	98.3		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P415325

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	86.9		P	40 - 150
2,4,5-T	47.0		P	40 - 150
Acetaminophen	79.8		P	30 - 150
Acetamiprid	92.7		P	40 - 150
Afidopyropen	70.5		P	30 - 150
Bentazon	73.6		P	30 - 150
Benzovindiflupyr	85.1		P	40 - 150
Carbamazepine	90.6		P	40 - 150
Clothianidin	95.3		P	40 - 150
Dinotefuran	91.8		P	40 - 150
Diuron	92.1		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P415325

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fenuron	87.9		P	40 - 150
Fluridone	81.0		P	40 - 150
Hydrocodone	89.4		P	40 - 150
Ibuprofen	61.2		P	40 - 150
Imazapyr	86.4		P	40 - 150
Imidacloprid	92.6		P	40 - 150
Linuron	85.9		P	40 - 150
Mandestrobin	83.0		P	40 - 150
MCPP	77.3		P	40 - 150
Naproxen	69.4		P	40 - 150
Primidone	93.0		P	40 - 150
Pyraclostrobin	75.8		P	40 - 150
Silvex	55.4		P	40 - 150
Thiamethoxam	85.7		P	40 - 150
Tolfenpyrad	46.7		P	30 - 150
Triclopyr	52.7		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P415749

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P415753

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.9		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P415475

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P415396

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334594	Calcium	106		P	80 - 120
2334594	Iron	107		P	80 - 120
2334594	Magnesium	105		P	80 - 120
2334594	Potassium	101		P	80 - 120
2334594	Sodium	104		P	80 - 120
2334913	Calcium	103		P	80 - 120
2334913	Iron	104		P	80 - 120
2334913	Magnesium	104		P	80 - 120
2334913	Potassium	101		P	80 - 120
2334913	Sodium	101		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P415515

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2335182	Strontium	111	110	P/P	80 - 120
2335182	Tin	104	102	P/P	80 - 120
2335182	Titanium	106	105	P/P	80 - 120
2335182	Vanadium	102	100	P/P	80 - 120
2335182	Zinc	108	107	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P415396

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334594	Aluminum	101	98.5	P/P	80 - 120
2334594	Antimony	99.8	100	P/P	80 - 120
2334594	Arsenic	99.9	100	P/P	80 - 120
2334594	Barium	101	101	P/P	80 - 120
2334594	Beryllium	94.2	94.1	P/P	80 - 120
2334594	Boron	107	104	P/P	80 - 120
2334594	Cadmium	97.4	98.5	P/P	80 - 120
2334594	Chromium	97.7	98.3	P/P	80 - 120
2334594	Cobalt	99.9	100	P/P	80 - 120
2334594	Copper	98.0	98.5	P/P	80 - 120
2334594	Lead	102	101	P/P	80 - 120
2334594	Manganese	98.8	99.4	P/P	80 - 120
2334594	Molybdenum	100	99.3	P/P	80 - 120
2334594	Nickel	98.4	98.3	P/P	80 - 120
2334594	Selenium	96.7	95.9	P/P	80 - 120
2334594	Silver	98.4	98.2	P/P	80 - 120
2334594	Thallium	102	102	P/P	80 - 120
2334913	Aluminum	97.1		P	80 - 120
2334913	Antimony	101		P	80 - 120
2334913	Arsenic	97.1		P	80 - 120
2334913	Beryllium	93.0		P	80 - 120
2334913	Boron	108		P	80 - 120
2334913	Cadmium	98.7		P	80 - 120
2334913	Chromium	97.4		P	80 - 120
2334913	Cobalt	95.9		P	80 - 120
2334913	Copper	91.9		P	80 - 120
2334913	Lead	100		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P415396

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334913	Manganese	98.8		P	80 - 120
2334913	Molybdenum	100		P	80 - 120
2334913	Nickel	94.5		P	80 - 120
2334913	Selenium	93.8		P	80 - 120
2334913	Silver	97.9		P	80 - 120
2334913	Thallium	100		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P415804

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334560	Chloride	94.9		P	90 - 110
2334583	Chloride	94.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P415806

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334560	Sulfate	94.8		P	90 - 110
2334583	Sulfate	95.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P415645

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334653	Ammonia-N	97.0	96.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P415663

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334765	NO2NO3-N	101	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P415572

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334640	Total-P	102	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P415276

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334451	O-Phosphate-P	99.8	99.7	P/P	90 - 110

Reference Method: EPA 8270E

Batch ID: P415327

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334212	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	105	102	P/P	50 - 150
2334212	Acetochlor	120	107	P/P	65 - 124
2334212	Alachlor	105	99.9	P/P	61 - 121

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P415327

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334212	Ametryn	95.3	99.8	P/P	52 - 216
2334212	Atrazine Desethyl	50.7	47.0	P/P	15 - 160
2334212	Avobenzone	124	116	P/P	59 - 206
2334212	Azinphos Methyl	150	142	P/P	40 - 292
2334212	Azoxystrobin	127	114	P/P	12 - 242
2334212	Bromacil	106	84.2	P/P	54 - 167
2334212	Butylate	57.6	54.8	P/P	14 - 94.0
2334212	Caffeine	99.9	99.6	P/P	10 - 226
2334212	Carbophenothion	106	98.0	P/P	49 - 122
2334212	Carfentrazone Ethyl	118	101	P/P	53 - 138
2334212	Chlorfenapyr	83.5	73.1	P/P	50 - 150
2334212	Chlorpyrifos Ethyl	91.9	82.1	P/P	52 - 122
2334212	Chlorpyrifos Methyl	100	88.5	P/P	66 - 117
2334212	Coumaphos	102	88.3	P/P	50 - 220
2334212	Cyanazine	141	127	P/P	43 - 245
2334212	Cyprodinil	104	91.0	P/P	50 - 150
2334212	Demeton	95.9	83.9	P/P	43 - 188
2334212	Diazinon	122	111	P/P	69 - 131
2334212	Difenoconazole	169	148	P/P	34 - 231
2334212	Dimethenamid	98.2	87.7	P/P	55 - 118
2334212	Dimethomorph	115	107	P/P	50 - 150
2334212	Disulfoton	97.0	83.4	P/P	38 - 141
2334212	Dithiopyr	77.4	68.0	P/P	42 - 116
2334212	EPTC	52.7	51.4	P/P	18 - 85.0
2334212	Ethion	85.0	67.8	P/P	10 - 131
2334212	Ethoprop	99.3	89.2	P/P	65 - 129
2334212	Etridiazole	72.1	51.3	P/P	50 - 150
2334212	Fenamiphos	83.2	79.2	P/P	31 - 137
2334212	Fenbuconazole	116	99.4	P/P	57 - 160
2334212	Fipronil	117	103	P/P	62 - 132
2334212	Fipronil Desulfinyl	114	99.9	P/P	57 - 131
2334212	Fipronil Sulfide	92.4	81.5	P/P	15 - 138
2334212	Fipronil Sulfone	92.1	76.2	P/P	21 - 134
2334212	Fluazifop-P-butyl	108	95.7	P/P	54 - 133
2334212	Fludioxonil	115	101	P/P	58 - 127
2334212	Flumioxazin	191	165	P/P	33 - 300
2334212	Flutolanil	95.1	81.3	P/P	42 - 130
2334212	Fluxapyroxad	94.9	88.2	P/P	23 - 141
2334212	Fonofos	92.4	82.8	P/P	58 - 119
2334212	Hexazinone	101	92.3	P/P	68 - 172
2334212	Imazalil	92.8	92.2	P/P	48 - 283
2334212	Iprodione	119	104	P/P	38 - 140
2334212	Loratadine	102	94.0	P/P	50 - 150
2334212	Malathion	105	94.1	P/P	40 - 137
2334212	Metalaxyl	98.1	90.9	P/P	21 - 129
2334212	Metolachlor	107	98.4	P/P	55 - 122
2334212	Metribuzin	115	96.9	P/P	38 - 187
2334212	Mevinphos	95.4	81.1	P/P	54 - 134
2334212	Molinate	77.2	71.3	P/P	41 - 97.0
2334212	Myclobutanil	102	93.2	P/P	56 - 125
2334212	Naled	116	106	F/P	10 - 108
2334212	Napropamide	87.9	74.9	P/P	50 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P415327

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334212	Norflurazon	102	84.0	P/P	32 - 122
2334212	Octinoxate	81.9	58.2	P/P	25 - 150
2334212	Oxybenzone	94.8	89.4	P/P	59 - 147
2334212	Oxyfluorfen	152	138	P/P	61 - 153
2334212	Parathion Ethyl	104	93.7	P/P	59 - 130
2334212	Parathion Methyl	124	109	P/P	65 - 155
2334212	PBDE-47	96.9	91.2	P/P	50 - 150
2334212	PBDE-99	95.6	90.5	P/P	50 - 150
2334212	Pendimethalin	118	105	P/P	49 - 138
2334212	Phenytol	57.8	48.2	P/F	50 - 200
2334212	Phorate	92.2	80.9	P/P	54 - 161
2334212	Prodiamine	83.5	79.2	P/P	33 - 161
2334212	Prometon	76.5	68.7	P/P	48 - 140
2334212	Prometryn	78.8	68.0	P/P	55 - 134
2334212	Pronamide	115	102	P/P	66 - 137
2334212	Propanil	101	87.8	P/P	50 - 150
2334212	Propargite	83.6	76.8	P/P	50 - 200
2334212	Pyraflufen Ethyl	97.2	85.2	P/P	50 - 150
2334212	Pyridaben	103	96.5	P/P	50 - 200
2334212	Pyriproxyfen	93.6	87.2	P/P	10 - 165
2334212	Simazine	91.4	82.3	P/P	57 - 145
2334212	Stiropfos	46.4	37.6	F/F	50 - 150
2334212	Sulfentrazone	112	97.4	P/P	34 - 140
2334212	Tebuconazole	89.2	76.6	P/P	10 - 127
2334212	Terbufos	120	104	P/P	59 - 138
2334212	Terbutylazine	118	102	P/P	68 - 119
2334212	Thiobencarb	91.4	80.3	P/P	50 - 150
2334212	Tri-o-cresyl Phosphate	102	95.3	P/P	50 - 150
2334212	Triadimefon	98.5	85.6	P/P	50 - 150

Reference Method: EPA 8321B
Batch ID: P415240

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334644	Acesulfame K	73.2	72.6	P/P	40 - 150
2334644	AMPA	80.2	81.8	P/P	40 - 150
2334644	Endothall	101	101	P/P	40 - 150
2334644	Glufosinate	83.6	87.0	P/P	40 - 150
2334644	Glyphosate	93.5	97.0	P/P	40 - 150
2334644	Sucralose	100	103	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P415325

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334980	2,4-D	85.8	84.3	P/P	40 - 150
2334980	2,4,5-T	41.5	45.4	P/P	40 - 150
2334980	Acetaminophen	94.0	96.8	P/P	30 - 150
2334980	Acetamiprid	83.6	81.2	P/P	40 - 150
2334980	Afidopyropen	64.9	72.3	P/P	30 - 150
2334980	Bentazon	60.1	60.3	P/P	30 - 150
2334980	Benzovindiflupyr	82.1	77.7	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P415325

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334980	Carbamazepine	86.4	91.9	P/P	40 - 150
2334980	Clothianidin	82.3	98.8	P/P	40 - 150
2334980	Dinotefuran	101	109	P/P	40 - 150
2334980	Diuron	77.2	76.5	P/P	40 - 150
2334980	Fenuron	84.0	87.8	P/P	40 - 150
2334980	Fluridone	76.7	80.2	P/P	40 - 150
2334980	Hydrocodone	85.0	87.4	P/P	40 - 150
2334980	Ibuprofen	64.6	71.6	P/P	40 - 150
2334980	Imazapyr	84.3	82.3	P/P	40 - 150
2334980	Imidacloprid	110	125	P/P	40 - 150
2334980	Linuron	80.6	83.0	P/P	40 - 150
2334980	Mandestrobin	75.8	82.0	P/P	40 - 150
2334980	MCPP	67.5	67.5	P/P	40 - 150
2334980	Naproxen	67.9	87.3	P/P	40 - 150
2334980	Primidone	77.3	104	P/P	40 - 150
2334980	Pyraclostrobin	76.0	78.5	P/P	40 - 150
2334980	Silvex	60.5	60.9	P/P	40 - 150
2334980	Thiamethoxam	95.4	96.2	P/P	40 - 150
2334980	Tolfenpyrad	45.9	47.1	P/P	30 - 150
2334980	Triclopyr	45.5	48.2	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P415753

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334356	Fluoride	102	102	P/P	94 - 104

Reference Method: SM 5310 B-2011

Batch ID: P415475

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334653	Organic Carbon	96.1	96.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P415268

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334833	Color (true)	0.189	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P415259

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334803	Turbidity	2.33	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P415396

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334594	Calcium	0.279	Spike	P	0 - 20
2334594	Iron	19.8	Spike	P	0 - 20
2334594	Magnesium	0.0675	Spike	P	0 - 20
2334594	Potassium	0.744	Spike	P	0 - 20
2334594	Sodium	0.291	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P415515

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335182	Strontium	0.522	Spike	P	0 - 20
2335182	Tin	2.03	Spike	P	0 - 20
2335182	Titanium	1.71	Spike	P	0 - 20
2335182	Vanadium	1.54	Spike	P	0 - 20
2335182	Zinc	1.13	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P415396

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334594	Aluminum	2.34	Spike	P	0 - 20
2334594	Antimony	0.341	Spike	P	0 - 20
2334594	Arsenic	0.256	Spike	P	0 - 20
2334594	Barium	0.512	Spike	P	0 - 20
2334594	Beryllium	0.155	Spike	P	0 - 20
2334594	Boron	2.15	Spike	P	0 - 20
2334594	Cadmium	1.11	Spike	P	0 - 20
2334594	Chromium	0.618	Spike	P	0 - 20
2334594	Cobalt	0.228	Spike	P	0 - 20
2334594	Copper	0.500	Spike	P	0 - 20
2334594	Lead	0.672	Spike	P	0 - 20
2334594	Manganese	0.518	Spike	P	0 - 20
2334594	Molybdenum	0.943	Spike	P	0 - 20
2334594	Nickel	0.106	Spike	P	0 - 20
2334594	Selenium	0.826	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P415396

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334594	Silver	0.147	Spike	P	0 - 20
2334594	Thallium	0.542	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P415804

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334560	Chloride	0.0106	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P415806

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334560	Sulfate	0.226	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P415645

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334653	Ammonia-N	0.540	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P415619

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334604	Kjeldahl Nitrogen	2.35	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P415663

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334765	NO2NO3-N	1.04	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P415572

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334640	Total-P	1.42	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P415276

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334451	O-Phosphate-P	0.100	Spike	P	0 - 20

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P415327

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334212	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	2.72	Spike	P	0 - 30
2334212	Acetochlor	11.8	Spike	P	0 - 27
2334212	Alachlor	4.56	Spike	P	0 - 27
2334212	Ametryn	4.63	Spike	P	0 - 34
2334212	Atrazine	12.5	Spike	P	0 - 41
2334212	Atrazine Desethyl	5.33	Spike	P	0 - 38
2334212	Avobenzone	6.52	Spike	P	0 - 30
2334212	Azinphos Methyl	5.11	Spike	P	0 - 62
2334212	Azoxystrobin	11.3	Spike	P	0 - 32
2334212	Bromacil	22.8	Spike	P	0 - 30
2334212	Butylate	4.86	Spike	P	0 - 59
2334212	Caffeine	0.256	Spike	P	0 - 60
2334212	Carbophenothion	7.85	Spike	P	0 - 25
2334212	Carfentrazone Ethyl	16.0	Spike	P	0 - 26
2334212	Chlorfenapyr	13.2	Spike	P	0 - 30
2334212	Chlorpyrifos Ethyl	11.2	Spike	P	0 - 27
2334212	Chlorpyrifos Methyl	12.6	Spike	P	0 - 26
2334212	Coumaphos	14.4	Spike	P	0 - 30
2334212	Cyanazine	10.2	Spike	P	0 - 58
2334212	Cyprodinil	13.3	Spike	P	0 - 30
2334212	Demeton	13.4	Spike	P	0 - 25
2334212	Diazinon	9.33	Spike	P	0 - 29
2334212	Difenoconazole	13.5	Spike	P	0 - 25
2334212	Dimethenamid	6.98	Spike	P	0 - 30
2334212	Dimethomorph	7.23	Spike	P	0 - 30
2334212	Disulfoton	15.1	Spike	P	0 - 33
2334212	Dithiopyr	12.1	Spike	P	0 - 22
2334212	EPTC	2.37	Spike	P	0 - 38
2334212	Ethion	22.5	Spike	P	0 - 79
2334212	Ethoprop	10.7	Spike	P	0 - 23
2334212	Etridiazole	33.7	Spike	F	0 - 30
2334212	Fenamiphos	4.84	Spike	P	0 - 58
2334212	Fenbuconazole	15.3	Spike	P	0 - 37
2334212	Fipronil	13.3	Spike	P	0 - 33
2334212	Fipronil Desulfinyl	10.6	Spike	P	0 - 26
2334212	Fipronil Sulfide	12.5	Spike	P	0 - 37
2334212	Fipronil Sulfone	15.2	Spike	P	0 - 50
2334212	Fluazifop-P-butyl	11.9	Spike	P	0 - 24
2334212	Fludioxonil	12.7	Spike	P	0 - 26
2334212	Flumioxazin	14.6	Spike	P	0 - 37
2334212	Flutolanil	15.7	Spike	P	0 - 26
2334212	Fluxapyroxad	7.34	Spike	P	0 - 34
2334212	Fonofos	11.0	Spike	P	0 - 27
2334212	Hexazinone	8.81	Spike	P	0 - 36
2334212	Imazalil	0.629	Spike	P	0 - 65
2334212	Iprodione	13.3	Spike	P	0 - 33
2334212	Loratadine	8.45	Spike	P	0 - 30
2334212	Malathion	10.6	Spike	P	0 - 44
2334212	Metalaxyl	7.55	Spike	P	0 - 38
2334212	Metolachlor	8.35	Spike	P	0 - 36
2334212	Metribuzin	17.4	Spike	P	0 - 63

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P415327

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334212	Mevinphos	16.3	Spike	P	0 - 26
2334212	Molinate	8.00	Spike	P	0 - 40
2334212	Myclobutanil	6.45	Spike	P	0 - 21
2334212	Naled	8.95	Spike	P	0 - 26
2334212	Napropamide	15.9	Spike	P	0 - 30
2334212	Norflurazon	19.2	Spike	P	0 - 24
2334212	Octinoxate	17.2	Spike	P	0 - 30
2334212	Oxadiazon	6.19	Spike	P	0 - 27
2334212	Oxybenzone	5.82	Spike	P	0 - 30
2334212	Oxyfluorfen	9.95	Spike	P	0 - 24
2334212	Parathion Ethyl	10.2	Spike	P	0 - 28
2334212	Parathion Methyl	12.8	Spike	P	0 - 27
2334212	PBDE-47	6.02	Spike	P	0 - 30
2334212	PBDE-99	5.44	Spike	P	0 - 30
2334212	Pendimethalin	11.2	Spike	P	0 - 31
2334212	Phenytoin	18.2	Spike	P	0 - 30
2334212	Phorate	13.0	Spike	P	0 - 27
2334212	Prodiamine	5.35	Spike	P	0 - 52
2334212	Prometon	10.8	Spike	P	0 - 31
2334212	Prometryn	14.8	Spike	P	0 - 28
2334212	Pronamide	12.6	Spike	P	0 - 26
2334212	Propanil	14.1	Spike	P	0 - 30
2334212	Propargite	8.46	Spike	P	0 - 30
2334212	Propiconazole	5.49	Spike	P	0 - 31
2334212	Pyraflufen Ethyl	13.2	Spike	P	0 - 30
2334212	Pyridaben	6.63	Spike	P	0 - 30
2334212	Pyriproxyfen	7.11	Spike	P	0 - 50
2334212	Simazine	10.5	Spike	P	0 - 29
2334212	Stirophos	21.0	Spike	P	0 - 30
2334212	Sulfentrazone	14.3	Spike	P	0 - 33
2334212	Tebuconazole	9.04	Spike	P	0 - 44
2334212	Terbufos	14.0	Spike	P	0 - 29
2334212	Terbuthylazine	13.7	Spike	P	0 - 27
2334212	Thiobencarb	13.0	Spike	P	0 - 30
2334212	Tri-o-cresyl Phosphate	6.41	Spike	P	0 - 30
2334212	Triadimefon	14.0	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P415240

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334644	Acesulfame K	0.874	Spike	P	0 - 30
2334644	AMPA	2.05	Spike	P	0 - 30
2334644	Endothall	0.546	Spike	P	0 - 30
2334644	Glufosinate	3.99	Spike	P	0 - 30
2334644	Glyphosate	3.69	Spike	P	0 - 30
2334644	Sucralose	3.15	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
 Batch ID: P415325

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334980	2,4-D	1.79	Spike	P	0 - 30
2334980	2,4,5-T	8.96	Spike	P	0 - 30
2334980	Acetaminophen	2.89	Spike	P	0 - 30
2334980	Acetamiprid	2.93	Spike	P	0 - 30
2334980	Afidopyropen	10.8	Spike	P	0 - 30
2334980	Bentazon	0.430	Spike	P	0 - 30
2334980	Benzovindiflupyr	5.48	Spike	P	0 - 30
2334980	Carbamazepine	4.98	Spike	P	0 - 30
2334980	Clothianidin	18.2	Spike	P	0 - 30
2334980	Dinotefuran	7.60	Spike	P	0 - 30
2334980	Diuron	0.987	Spike	P	0 - 30
2334980	Fenuron	4.43	Spike	P	0 - 30
2334980	Fluridone	4.51	Spike	P	0 - 30
2334980	Hydrocodone	2.89	Spike	P	0 - 30
2334980	Ibuprofen	10.3	Spike	P	0 - 30
2334980	Imazapyr	2.45	Spike	P	0 - 30
2334980	Imidacloprid	10.7	Spike	P	0 - 30
2334980	Linuron	2.99	Spike	P	0 - 30
2334980	Mandestrobin	7.77	Spike	P	0 - 30
2334980	MCP	0.125	Spike	P	0 - 30
2334980	Naproxen	25.0	Spike	P	0 - 30
2334980	Primidone	29.1	Spike	P	0 - 30
2334980	Pyraclostrobin	3.24	Spike	P	0 - 30
2334980	Silvex	0.733	Spike	P	0 - 30
2334980	Thiamethoxam	0.838	Spike	P	0 - 30
2334980	Tolfenpyrad	2.65	Spike	P	0 - 30
2334980	Triclopyr	5.77	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
 Batch ID: P415749

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334356	Total Alkalinity	1.37	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2011
 Batch ID: P415658

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334639	TDS	6.23	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
 Batch ID: P415753

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334356	Fluoride	0.0	Spike	P	0 - 1.6

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P415475

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334653	Organic Carbon	0.261	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2334837

Field Sample ID: G2CE0254

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	67.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	98.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	88.2	P	30 - 160
EPA 8321B	Diuron-d6	82.6	P	30 - 160
EPA 8321B	Endothall-d6	103	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	77.7	P	30 - 160
EPA 8321B	Ibuprofen-d3	65.2	P	30 - 160
EPA 8321B	Primidone-d5	88.0	P	30 - 160
EPA 8321B	Sucralose-d6	79.7	P	30 - 160

Lab Sample ID: 2334839

Field Sample ID: G2CE0254

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	66.6	P	20 - 200
EPA 8270E	Simazine-d10	107	P	71 - 140
EPA 8270E	Terbufos-d10	92.6	P	62 - 131
EPA 8270E	Terphenyl-d14	93.4	P	52 - 141

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A112850

Included Lab Sample IDs: 2334833

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

Reference Method: DEP SOP: NU-094-1

Run ID: A112852

Included Lab Sample IDs: 2334833

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.9	99.3	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A112857

Included Lab Sample IDs: 2334835

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	102	99.7	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A112919

Included Lab Sample IDs: 2334837

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	118	126	P/P	60 - 160
Sucralose	106	104	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A112921

Included Lab Sample IDs: 2334837

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	106	114	P/P	60 - 160
Endothall	109	99.5	P/P	60 - 160
Glufosinate	108	112	P/P	60 - 160
Glyphosate	111	112	P/P	60 - 160

Reference Method: SM 5310 B-2011

Run ID: A112948

Included Lab Sample IDs: 2334834

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.2	98.7	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A112966

Included Lab Sample IDs: 2334838

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	107	108	P/P	90 - 110
Iron	106	106	P/P	90 - 110
Magnesium	106	107	P/P	90 - 110
Potassium	103	103	P/P	90 - 110
Sodium	104	104	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A112967

Included Lab Sample IDs: 2334838

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	101	100	P/P	90 - 110
Antimony	98.2	98.1	P/P	90 - 110
Arsenic	99.5	97.4	P/P	90 - 110
Barium	98.8	97.2	P/P	90 - 110
Beryllium	95.4	93.8	P/P	90 - 110
Boron	104	105	P/P	90 - 110
Cadmium	98.4	99.4	P/P	90 - 110
Chromium	98.6	98.4	P/P	90 - 110
Cobalt	100	95.7	P/P	90 - 110
Copper	99.1	94.2	P/P	90 - 110
Lead	99.1	98.7	P/P	90 - 110
Manganese	98.5	98.9	P/P	90 - 110
Molybdenum	99.0	98.6	P/P	90 - 110
Nickel	99.3	94.3	P/P	90 - 110
Selenium	96.4	95.8	P/P	90 - 110
Silver	100	100	P/P	90 - 110
Thallium	97.8	96.9	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A112975

Included Lab Sample IDs: 2334837

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	103	99.5	P/P	50 - 150
2,4,5-T	105	111	P/P	50 - 150
Acetaminophen	105	106	P/P	60 - 160
Acetamiprid	103	105	P/P	50 - 150
Afidopyropen	105	108	P/P	50 - 150
Bentazon	94.8	85.5	P/P	50 - 160
Benzovindiflupyr	92.1	103	P/P	50 - 150
Carbamazepine	99.6	98.6	P/P	60 - 150
Clothianidin	100	110	P/P	60 - 150
Dinotefuran	101	96.9	P/P	50 - 150
Diuron	114	132	P/P	60 - 160
Fenuron	95.3	98.5	P/P	60 - 150
Fluridone	99.6	95.1	P/P	60 - 160
Hydrocodone	96.5	98.6	P/P	60 - 150
Ibuprofen	114	81.2	P/P	50 - 160
Imazapyr	89.8	88.9	P/P	50 - 150
Imidacloprid	102	98.7	P/P	60 - 150
Linuron	103	109	P/P	60 - 150
Mandestrobin	101	102	P/P	50 - 150
MCPP	110	107	P/P	50 - 150
Naproxen	111	124	P/P	50 - 160
Primidone	119	101	P/P	60 - 150
Pyraclostrobin	101	101	P/P	60 - 150
Silvex	108	102	P/P	50 - 150
Thiamethoxam	97.7	99.3	P/P	50 - 150
Tolfenpyrad	95.9	95.7	P/P	60 - 150
Triclopyr	108	95.2	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A112976

Included Lab Sample IDs: 2334833

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	97.2	96.2	P/P	90 - 110
Sulfate	99.2	98.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A113007

Included Lab Sample IDs: 2334834

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.7	98.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A113014

Included Lab Sample IDs: 2334834

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A113025

Included Lab Sample IDs: 2334838

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Strontium	102	104	P/P	95 - 105
Tin	99.3	97.2	P/P	95 - 105
Titanium	101	99.1	P/P	95 - 105
Vanadium	101	99.1	P/P	95 - 105
Zinc	100	98.5	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A113043

Included Lab Sample IDs: 2334834

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

Reference Method: SM 2320 B-2011

Run ID: A113064

Included Lab Sample IDs: 2334833

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.7	98.1	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A113064

Included Lab Sample IDs: 2334833

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.4	98.6	P/P	90 - 110

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8270E

Run ID: A113084

Included Lab Sample IDs: 2334839

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	96.8		P	80 - 120
Alachlor	99.5		P	80 - 120
Ametryn	93.6		P	80 - 120
Atrazine	99.6		P	80 - 120
Atrazine Desethyl	103		P	80 - 120
Azinphos Methyl	94.1		P	80 - 120
Azoxystrobin	101		P	80 - 120
Bromacil	99.9		P	80 - 120
Butylate	99.1		P	80 - 120
Caffeine	105		P	80 - 120
Carbophenothion	96.8		P	80 - 120
Carfentrazone Ethyl	92.5		P	80 - 120
Chlorfenapyr	94.4		P	80 - 120
Chlorpyrifos Ethyl	98.1		P	80 - 120
Chlorpyrifos Methyl	99.2		P	80 - 120
Coumaphos	94.4		P	80 - 120
Cyanazine	95.5		P	80 - 120
Cyprodinil	102		P	80 - 120
Demeton	92.5		P	80 - 120
Diazinon	96.4		P	80 - 120
Difenoconazole	93.0		P	80 - 120
Dimethenamid	101		P	80 - 120
Dimethomorph	101		P	80 - 120
Disulfoton	97.9		P	80 - 120
Dithiopyr	97.2		P	80 - 120
EPTC	100		P	80 - 120
Ethion	95.7		P	80 - 120
Ethoprop	98.0		P	80 - 120
Etridiazole	96.4		P	80 - 120
Fenamiphos	97.3		P	80 - 120
Fenbuconazole	98.6		P	80 - 120
Fipronil	100		P	80 - 120
Fipronil Desulfinyl	98.7		P	80 - 120
Fipronil Sulfide	103		P	80 - 120
Fipronil Sulfone	103		P	80 - 120
Fluazifop-P-butyl	91.9		P	80 - 120
Fludioxonil	95.3		P	80 - 120
Flumioxazin	91.6		P	80 - 120
Flutolanil	101		P	80 - 120
Fluxapyroxad	99.2		P	80 - 120
Fonofos	102		P	80 - 120
Hexazinone	99.4		P	80 - 120
Imazalil	96.5		P	80 - 120
Iprodione	93.5		P	80 - 120
Loratadine	100		P	80 - 120
Malathion	94.4		P	80 - 120
Metalaxyl	101		P	80 - 120
Metolachlor	99.9		P	80 - 120
Metribuzin	93.7		P	80 - 120
Mevinphos	101		P	80 - 120
Molinate	98.8		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A113084
Included Lab Sample IDs: 2334839

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Myclobutanil	101		P	80 - 120
Naled	100		P	80 - 120
Napropamide	97.5		P	80 - 120
Norflurazon	98.1		P	80 - 120
Oxadiazon	98.0		P	80 - 120
Oxyfluorfen	102		P	80 - 120
Parathion Ethyl	97.9		P	80 - 120
Parathion Methyl	104		P	80 - 120
Pendimethalin	104		P	80 - 120
Phenytol	98.4		P	80 - 120
Phorate	97.5		P	80 - 120
Prodiamine	111		P	80 - 120
Prometon	99.6		P	80 - 120
Prometryn	95.5		P	80 - 120
Pronamide	101		P	80 - 120
Propanil	94.0		P	80 - 120
Propargite	95.6		P	80 - 120
Propiconazole	99.3		P	80 - 120
Pyraflufen Ethyl	102		P	80 - 120
Pyridaben	103		P	80 - 120
Pyriproxyfen	96.5		P	80 - 120
Simazine	98.4		P	80 - 120
Stirophos	97.0		P	80 - 120
Sulfentrazone	95.6		P	80 - 120
Tebuconazole	99.7		P	80 - 120
Terbufos	95.2		P	80 - 120
Terbutylazine	92.4		P	80 - 120
Thiobencarb	103		P	80 - 120
Triadimefon	101		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A113135
Included Lab Sample IDs: 2334834

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	101	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A113161
Included Lab Sample IDs: 2334839

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	96.7		P	80 - 120
Avobenzone	101		P	80 - 120
Octinoxate	94.6		P	80 - 120
Oxybenzone	99.3		P	80 - 120
PBDE-47	94.9		P	80 - 120
PBDE-99	95.7		P	80 - 120
Tri-o-cresyl Phosphate	98.2		P	80 - 120

Quality Assurance Report

Calibration Verification

* 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
DEP SOP: NU-094-1	Color (true)	95.2				0.189	
EPA 180.1 Rev. 2.0	Turbidity	96.8				2.33	
EPA 200.7 Rev. 4.4	Calcium	106	103	106			0.279
	Iron	104	107	104			19.8
	Magnesium	102	105	104			0.0675
	Potassium	102	101	101			0.744
	Sodium	104	104	101			0.291
	Strontium	104	111	110			0.522
	Tin	100	104	102			2.03
	Titanium	103	106	105			1.71
	Vanadium	95.2	102	100			1.54
	Zinc	102	108	107			1.13
EPA 200.8 Rev. 5.4	Aluminum	98.7	101	98.5	97.1		2.34
	Antimony	97.9	99.8	100	101		0.341
	Arsenic	99.4	99.9	100	97.1		0.256
	Barium	102	101	101			0.512
	Beryllium	94.6	94.2	94.1	93.0		0.155
	Boron	106	107	104	108		2.15
	Cadmium	96.7	97.4	98.5	98.7		1.11
	Chromium	96.4	97.7	98.3	97.4		0.618
	Cobalt	99.7	99.9	100	95.9		0.228
	Copper	96.6	98.0	98.5	91.9		0.500
	Lead	99.5	102	101	100		0.672
	Manganese	97.4	98.8	99.4	98.8		0.518
	Molybdenum	98.7	100	99.3	100		0.943
	Nickel	98.4	98.4	98.3	94.5		0.106
	Selenium	97.1	96.7	95.9	93.8		0.826
	Silver	98.6	98.4	98.2	97.9		0.147
	Thallium	99.7	102	102	100		0.542
EPA 300.0 Rev. 2.1	Chloride	94.1	94.9	94.8		0.0106	
	Sulfate	97.0	94.8	95.5		0.226	
EPA 350.1 Rev. 2.0	Ammonia-N	96.2	97.0	96.4			0.540
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103					2.35
EPA 353.2 Rev. 2.0	NO2NO3-N	100	101	99.0			1.04
EPA 365.1 Rev. 2.0	Total-P	99.5	102	104			1.42
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.0	99.8	99.7			0.100
EPA 8270E	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	103	105	102			2.72
	Acetochlor	97.6	120	107			11.8
	Alachlor	92.5	105	99.9			4.56
	Ametryn	97.4	95.3	99.8			4.63
	Atrazine	100					12.5
	Atrazine Desethyl	68.9	50.7	47.0			5.33
	Avobenzone	103	124	116			6.52
	Azinphos Methyl	127	150	142			5.11
	Azoxystrobin	102	127	114			11.3
	Bromacil	84.6	106	84.2			22.8
	Butylate	67.8	57.6	54.8			4.86
	Caffeine	87.9	99.9	99.6			0.256
	Carbophenothion	100	106	98.0			7.85
	Carfentrazone Ethyl	110	118	101			16.0
	Chlorfenapyr	92.1	83.5	73.1			13.2
	Chlorpyrifos Ethyl	100	91.9	82.1			11.2

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8270E	Chlorpyrifos Methyl	101	100	88.5		12.6
	Coumaphos	104	102	88.3		14.4
	Cyanazine	129	141	127		10.2
	Cyprodinil	96.0	104	91.0		13.3
	Demeton	80.5	95.9	83.9		13.4
	Diazinon	95.6	122	111		9.33
	Difenoconazole	132	169	148		13.5
	Dimethenamid	78.7	98.2	87.7		6.98
	Dimethomorph	92.8	115	107		7.23
	Disulfoton	81.8	97.0	83.4		15.1
	Dithiopyr	88.0	77.4	68.0		12.1
	EPTC	66.5	52.7	51.4		2.37
	Ethion	96.3	85.0	67.8		22.5
	Ethoprop	87.9	99.3	89.2		10.7
	Etridiazole	69.1	72.1	51.3		33.7
	Fenamiphos	101	83.2	79.2		4.84
	Fenbuconazole	94.8	116	99.4		15.3
	Fipronil	99.1	117	103		13.3
	Fipronil Desulfinyl	106	114	99.9		10.6
	Fipronil Sulfide	87.4	92.4	81.5		12.5
	Fipronil Sulfone	93.0	92.1	76.2		15.2
	Fluazifop-P-butyl	98.1	108	95.7		11.9
	Fludioxonil	93.1	115	101		12.7
	Flumioxazin	142	191	165		14.6
	Flutolanil	95.3	95.1	81.3		15.7
	Fluxapyroxad	77.7	94.9	88.2		7.34
	Fonofos	90.5	92.4	82.8		11.0
	Hexazinone	103	101	92.3		8.81
	Imazalil	70.4	92.8	92.2		0.629
	Iprodione	106	119	104		13.3
	Loratadine	87.9	102	94.0		8.45
	Malathion	105	105	94.1		10.6
	Metalaxyl	95.4	98.1	90.9		7.55
	Metolachlor	93.2	107	98.4		8.35
	Metribuzin	94.6	115	96.9		17.4
	Mevinphos	83.2	95.4	81.1		16.3
	Molinate	75.8	77.2	71.3		8.00
	Myclobutanil	95.6	102	93.2		6.45
	Naled	113	116	106		8.95
	Napropamide	85.7	87.9	74.9		15.9
	Norflurazon	92.9	102	84.0		19.2
	Octinoxate	206	81.9	58.2		17.2
	Oxadiazon	80.4				6.19
	Oxybenzone	78.7	94.8	89.4		5.82
	Oxyfluorfen	129	152	138		9.95
	Parathion Ethyl	105	104	93.7		10.2
	Parathion Methyl	114	124	109		12.8
	PBDE-47	90.9	96.9	91.2		6.02
	PBDE-99	92.9	95.6	90.5		5.44
	Pendimethalin	106	118	105		11.2
	Phenytoin	64.9	57.8	48.2		18.2
	Phorate	81.4	92.2	80.9		13.0
	Prodiamine	56.4	83.5	79.2		5.35
	Prometon	71.8	76.5	68.7		10.8

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Prometryn	89.2	78.8	68.0			14.8
	Pronamide	93.0	115	102			12.6
	Propanil	93.6	101	87.8			14.1
	Propargite	92.9	83.6	76.8			8.46
	Propiconazole	90.0					5.49
	Pyraflufen Ethyl	91.4	97.2	85.2			13.2
	Pyridaben	96.9	103	96.5			6.63
	Pyriproxyfen	93.1	93.6	87.2			7.11
	Simazine	82.7	91.4	82.3			10.5
	Stirophos	97.7	46.4	37.6			21.0
	Sulfentrazone	93.8	112	97.4			14.3
	Tebuconazole	77.8	89.2	76.6			9.04
	Terbufos	106	120	104			14.0
	Terbuthylazine	95.6	118	102			13.7
	Thiobencarb	81.7	91.4	80.3			13.0
	Tri-o-cresyl Phosphate	92.5	102	95.3			6.41
	Triadimefon	92.1	98.5	85.6			14.0
EPA 8321B	2,4-D	86.9	85.8	84.3			1.79
	2,4,5-T	47.0	41.5	45.4			8.96
	Acesulfame K	104	73.2	72.6			0.874
	Acetaminophen	79.8	94.0	96.8			2.89
	Acetamiprid	92.7	83.6	81.2			2.93
	Afidopyropen	70.5	64.9	72.3			10.8
	AMPA	114	80.2	81.8			2.05
	Bentazon	73.6	60.1	60.3			0.430
	Benzovindiflupyr	85.1	82.1	77.7			5.48
	Carbamazepine	90.6	86.4	91.9			4.98
	Clothianidin	95.3	82.3	98.8			18.2
	Dinotefuran	91.8	101	109			7.60
	Diuron	92.1	77.2	76.5			0.987
	Endothall	102	101	101			0.546
	Fenuron	87.9	84.0	87.8			4.43
	Fluridone	81.0	76.7	80.2			4.51
	Glufosinate	110	83.6	87.0			3.99
	Glyphosate	115	93.5	97.0			3.69
	Hydrocodone	89.4	85.0	87.4			2.89
	Ibuprofen	61.2	64.6	71.6			10.3
	Imazapyr	86.4	84.3	82.3			2.45
	Imidacloprid	92.6	110	125			10.7
	Linuron	85.9	80.6	83.0			2.99
	Mandestrobin	83.0	75.8	82.0			7.77
	MCPP	77.3	67.5	67.5			0.125
	Naproxen	69.4	67.9	87.3			25.0
	Primidone	93.0	77.3	104			29.1
	Pyraclostrobin	75.8	76.0	78.5			3.24
	Silvex	55.4	60.5	60.9			0.733
	Sucralose	98.3	100	103			3.15
	Thiamethoxam	85.7	95.4	96.2			0.838
	Tolfenpyrad	46.7	45.9	47.1			2.65
	Triclopyr	52.7	45.5	48.2			5.77
SM 2320 B-2011	Total Alkalinity	101				1.37	
SM 2540 C-2011	TDS					6.23	
SM 4500-F- C-2011	Fluoride	96.9	102	102			0.0
SM 5310 B-2011	Organic Carbon	96.0	96.1	96.5			0.261

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2334833
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2334833
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2334838
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2334838
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2334833
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2334833
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2334834
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2334834
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2334834
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2334834
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2334835
EPA 8270E	Analysis of Sunscreen Compounds in Water by GC/MS-SIM	2334839
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2334839
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2334837
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2334833
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2334838
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2334833
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2334833
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2334833
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2334834

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	06/15/2022			06/15/2022 17:17	Samantha L Bates	2334833
EPA 180.1 Rev. 2.0	06/15/2022			06/15/2022 15:52	Khloe J Berg	2334833
EPA 200.7 Rev. 4.4	06/15/2022	06/19/2022 11:25	Emily M Philpot	06/21/2022 18:05	McKinley C Carter	2334838
	06/15/2022	06/22/2022 09:35	Megan Whitefoot	06/23/2022 14:30	McKinley C Carter	2334838
EPA 200.8 Rev. 5.4	06/15/2022	06/19/2022 11:25	Emily M Philpot	06/21/2022 20:01	Emily M Philpot	2334838
EPA 300.0 Rev. 2.1	06/15/2022			06/24/2022 16:33	Anna M. Plaviak	2334833
EPA 350.1 Rev. 2.0	06/15/2022			06/23/2022 12:43	Ping Hua	2334834
EPA 351.2 Rev. 2.0	06/15/2022	06/24/2022 10:30	Samantha L Bates	06/28/2022 11:03	Alexandra J Mattheus	2334834
EPA 353.2 Rev. 2.0	06/15/2022			06/22/2022 18:14	Touraj Touran	2334834
EPA 365.1 Rev. 2.0	06/15/2022	06/23/2022 14:45	Simonne.V. Calhoun	06/24/2022 11:08	James L Waggeberby	2334834
EPA 365.1 Rev. 2.0 dissolved	06/15/2022			06/15/2022 16:36	Blanca Fach	2334835
EPA 8270E	06/15/2022	06/20/2022 08:00	Rasheda Ghaffari	06/24/2022 20:44	Michael Poppell	2334839
	06/15/2022	06/20/2022 08:00	Rasheda Ghaffari	06/28/2022 17:44	Lipi Saha	2334839
EPA 8321B	06/15/2022	06/17/2022 09:00	Umesh Chiluwal	06/17/2022 12:55	Umesh Chiluwal	2334837
	06/15/2022	06/17/2022 09:00	Umesh Chiluwal	06/17/2022 23:28	Umesh Chiluwal	2334837
	06/15/2022	06/21/2022 09:00	June Rhew	06/21/2022 22:15	Juyoung Kim	2334837
SM 2320 B-2011	06/15/2022			06/23/2022 11:11	Dale L. Simmons	2334833
SM 2340 B-2011	06/15/2022			06/21/2022 18:05	McKinley C Carter	2334838
SM 2540 C-2011	06/15/2022			06/17/2022 14:36	Yijie Li	2334833
SM 2540 D-2011	06/15/2022			06/17/2022 14:36	Yijie Li	2334833
SM 4500-F- C-2011	06/15/2022			06/23/2022 11:11	Dale L. Simmons	2334833
SM 5310 B-2011	06/15/2022			06/20/2022 17:55	Khloe J Berg	2334834