

Chemical Analysis Report

CEN-DIST-2022-05-18-01

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

Event Description: **Lake Lily LVI**
Request ID: **RQ-2022-05-16-39**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
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3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
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Certified by: Colin Wright, Program Administrator

Date Certified: 10-JUN-2022 11:16

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light gray rectangular 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 Lily @ Center

Collection Date/Time: 05/17/2022 11:06

Field ID: G1CE0123

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2327859	DEP SOP: NU-094-1	Color (true)**	45		PCU	P414040	
	EPA 180.1 Rev. 2.0	Turbidity	0.95	I	NTU	P414037	
	EPA 300.0 Rev. 2.1	Chloride	23	A	mg Cl/L	P414291	
		Sulfate	11	A	mg SO4/L	P414295	
	SM 2320 B-2011	Total Alkalinity	51		mg CaCO3/L	P414260	
	SM 2540 C-2011	TDS	142	A	mg/L	P414428	
	SM 2540 D-2011	TSS	3	IA	mg/L	P414452	
	SM 4500-F- C-2011	Fluoride	0.087	I	mg F/L	P414266	
2327860	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P414162	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.73		mg N/L	P414282	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P414349	
	EPA 365.1 Rev. 2.0	Total-P	0.026		mg P/L	P414232	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P414513	
2327862	EPA 8321B	2,4-D	0.0063	I	ug/L	P414017	
		Acesulfame K	0.14	I	ug/L	P414089	
		2,4,5-T	0.0040	U	ug/L	P414017	
		AMPA	0.10	U	ug/L	P414089	
		Acetaminophen	0.0080	U	ug/L	P414017	
		Acetamiprid	0.0020	U	ug/L	P414017	
		Endothall	0.25	U	ug/L	P414089	
		Glufosinate	0.10	U	ug/L	P414089	
		Glyphosate	0.10	U	ug/L	P414089	
		Afidopyropen	0.0020	U	ug/L	P414017	
		Sucralose	2.1		ug/L	P414089	
		Bentazon	0.050		ug/L	P414017	MS
		Benzovindiflupyr	0.0020	U	ug/L	P414017	
		Carbamazepine	0.0010	I	ug/L	P414017	
		Clothianidin	0.0020	U	ug/L	P414017	
		Dinotefuran	0.0020	U	ug/L	P414017	
		Diuron	0.0020	U	ug/L	P414017	
		Fenuron	0.032	U	ug/L	P414017	
		Fluridone	0.0078		ug/L	P414017	
		Imazapyr	0.10		ug/L	P414017	
		Hydrocodone	0.0020	U	ug/L	P414017	
		Ibuprofen	0.020	U	ug/L	P414017	
		Imidacloprid	0.0020	U	ug/L	P414017	
		Linuron	0.0040	U	ug/L	P414017	
		Mandestrobin	0.0020	U	ug/L	P414017	
		MCPP	0.0040	U	ug/L	P414017	
		Naproxen	0.0080	U	ug/L	P414017	
		Primidone	0.0040	U	ug/L	P414017	
		Pyraclostrobin	0.0020	U	ug/L	P414017	
		Silvex	0.0040	U	ug/L	P414017	
		Thiamethoxam	0.0020	U	ug/L	P414017	

Field ID: G1CE0123

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2327862	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P414017	
		Triclopyr	0.0040	U	ug/L	P414017	
2327863	EPA 200.7 Rev. 4.4	Calcium	20.0		mg/L	P414064	
		Iron	36	I	ug/L	P414064	
		Magnesium	4.04		mg/L	P414064	
		Potassium	2.6		mg/L	P414064	
		Sodium	14.7		mg/L	P414064	
		Strontium	55.5		ug/L	P414064	
		Tin	3.0	U	ug/L	P414064	
		Titanium	0.89	I	ug/L	P414064	
		Vanadium	2.0	U	ug/L	P414064	
		Zinc	5.0	U	ug/L	P414064	
	EPA 200.8 Rev. 5.4	Aluminum	13	I	ug/L	P414064	
		Antimony	0.11	I	ug/L	P414064	
		Arsenic	0.35		ug/L	P414064	
		Barium	26.0		ug/L	P414064	
		Beryllium	0.010	U	ug/L	P414064	
		Boron**	36.9		ug/L	P414064	
		Cadmium	0.020	U	ug/L	P414064	
		Chromium	0.40	U	ug/L	P414064	
		Cobalt	0.022	I	ug/L	P414064	
		Copper	0.40	U	ug/L	P414064	
		Lead	0.20	U	ug/L	P414064	
		Manganese	14.0		ug/L	P414064	
		Molybdenum	0.15	U	ug/L	P414064	
		Nickel	0.50	U	ug/L	P414064	
		Selenium	0.20	U	ug/L	P414064	
		Silver	0.010	U	ug/L	P414064	
		Thallium	0.10	U	ug/L	P414064	
	SM 2340 B-2011	Hardness	66.6		mg/L	P414064	
2327864	EPA 8270E	Oxybenzone**	10	U	ng/L	P414133	
		Acetochlor	0.26	U	ng/L	P414133	
		Octinoxate**	26	I	ng/L	P414133	
		Alachlor	0.26	U	ng/L	P414133	
		Avobenzone**	100	U	ng/L	P414133	
		Ametryn	2.5		ng/L	P414133	
		Atrazine	72		ng/L	P414133	
		Atrazine Desethyl	16		ng/L	P414133	
		Azinphos Methyl	2.0	U	ng/L	P414133	
		Azoxystrobin**	0.51	U	ng/L	P414133	
		Bromacil	1.8	I	ng/L	P414133	
		Butylate	0.41	U	ng/L	P414133	
		Caffeine**	14	I	ng/L	P414133	
		Carbophenothion	0.20	U	ng/L	P414133	
		Carfentrazone Ethyl**	0.10	U	ng/L	P414133	

Field ID: G1CE0123

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2327864	EPA 8270E	Chlorfenapyr**	0.18	U	ng/L	P414133	
		Chlorpyrifos Ethyl	0.26	U	ng/L	P414133	
		Chlorpyrifos Methyl	0.051	U	ng/L	P414133	
		Coumaphos**	0.51	U	ng/L	P414133	
		Cyanazine	3.3	U	ng/L	P414133	
		Cyprodinil**	0.10	U	ng/L	P414133	
		Demeton	1.5	U	ng/L	P414133	
		Diazinon	0.13	U	ng/L	P414133	
		Difenoconazole**	0.61	U	ng/L	P414133	
		Dimethenamid**	0.10	U	ng/L	P414133	
		Dimethomorph**	0.18	U	ng/L	P414133	
		Disulfoton	0.51	U	ng/L	P414133	
		Dithiopyr**	0.32	I	ng/L	P414133	
		EPTC	1.3	U	ng/L	P414133	
		Ethion	0.15	U	ng/L	P414133	
		Ethoprop	0.10	U	ng/L	P414133	
		Etridiazole**	0.15	U	ng/L	P414133	
		Fenamiphos	0.51	U	ng/L	P414133	
		Fenbuconazole**	0.13	U	ng/L	P414133	
		Fipronil	0.26	U	ng/L	P414133	
		Fipronil Desulfinyl**	0.86		ng/L	P414133	
		Fipronil Sulfide	0.41	I	ng/L	P414133	
		Fipronil Sulfone	1.1		ng/L	P414133	
		Fluazifop-P-butyl**	0.10	U	ng/L	P414133	
		Fludioxonil**	0.13	U	ng/L	P414133	
		Flumioxazin**	1.8	U	ng/L	P414133	
		Flutolanil**	0.15	I	ng/L	P414133	
		Fluxapyroxad**	0.45		ng/L	P414133	
		Fonofos	0.20	U	ng/L	P414133	
		Hexazinone	0.51	U	ng/L	P414133	
		Imazalil**	0.77	U	ng/L	P414133	
		Iprodione**	0.61	U	ng/L	P414133	
		Loratadine**	0.10	U	ng/L	P414133	
		Malathion	0.36	U	ng/L	P414133	
		Metalaxyl	0.77	U	ng/L	P414133	
		Metolachlor	0.45	I	ng/L	P414133	
		Metribuzin	2.6	U	ng/L	P414133	
		Mevinphos	1.1	U	ng/L	P414133	
		Molinate	0.31	U	ng/L	P414133	
		Myclobutanil**	0.26	U	ng/L	P414133	
		Naled**	1.5	U	ng/L	P414133	
		Napropamide**	0.41	U	ng/L	P414133	
		Norflurazon	0.51	U	ng/L	P414133	
		Oxadiazon	0.95	I	ng/L	P414133	
		Oxyfluorfen**	0.15	U	ng/L	P414133	

Field ID: G1CE0123

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2327864	EPA 8270E	Parathion Ethyl	0.26	U	ng/L	P414133	
		Parathion Methyl	0.56	U	ng/L	P414133	
		Pendimethalin	1.0	U	ng/L	P414133	
		Phenytol**	3.6	U	ng/L	P414133	
		Phorate	0.54	U	ng/L	P414133	
		Prodiatone**	0.18	U	ng/L	P414133	
		Prometon	0.92	U	ng/L	P414133	
		Prometryn	0.20	U	ng/L	P414133	
		Pronatone**	0.15	U	ng/L	P414133	
		Propanil**	0.13	U	ng/L	P414133	
		Propargite**	1.5	U	ng/L	P414133	
		Propiconazole**	0.51	U	ng/L	P414133	
		Pyraflufen Ethyl**	0.26	U	ng/L	P414133	
		Pyridaben**	0.46	U	ng/L	P414133	
		Pyriproxyfen**	0.13	U	ng/L	P414133	
		Simazine	0.51	U	ng/L	P414133	
		Stirophos**	0.13	U	ng/L	P414133	
		Sulfentrazole**	1.7	I	ng/L	P414133	
		Tebuconazole**	0.80	I	ng/L	P414133	
		Terbufos	0.10	U	ng/L	P414133	
		Terbutylazine	0.43	U	ng/L	P414133	
		Thiobencarb**	0.61	U	ng/L	P414133	
		Triadimefon**	0.26	U	ng/L	P414133	
2327917	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P414047	

Ref. Method and Comment:

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

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P414040

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P414037

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P414064

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: P414064

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: P414291

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P414295

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P414162

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414282

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P414349

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414232

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P414047

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

Reference Method: EPA 8270E
Batch ID: P414133

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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P414133

Component	Result	Code	Units
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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P414133

Component	Result	Code	Units
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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P414133

Component	Result	Code	Units
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
Phenytoin	3.5	U	ng/L
Phenytoin	3.5	U	ng/L
Phorate	0.52	U	ng/L
Phorate	0.52	U	ng/L
Prodiamine	0.18	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Prometryn	0.20	U	ng/L
Pronamide	0.15	U	ng/L
Pronamide	0.15	U	ng/L
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
Terbutylazine	0.42	U	ng/L
Terbutylazine	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: P414017

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P414017

Component	Result	Code	Units
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	0.020	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: P414089

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 2320 B-2011

Batch ID: P414260

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

Reference Method: SM 2540 C-2011

Batch ID: P414428

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P414452

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P414266

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P414513

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: P414040

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P414037

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P414064

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	104		P	85 - 115
Iron	102		P	85 - 115
Magnesium	103		P	85 - 115
Potassium	100		P	85 - 115
Sodium	101		P	85 - 115
Strontium	101		P	85 - 115
Tin	106		P	85 - 115
Titanium	100		P	85 - 115
Vanadium	92.8		P	85 - 115
Zinc	100		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P414064

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.6		P	85 - 115
Antimony	99.4		P	85 - 115
Arsenic	98.7		P	85 - 115
Barium	101		P	85 - 115
Beryllium	95.8		P	85 - 115
Boron	104		P	85 - 115
Cadmium	98.1		P	85 - 115
Chromium	96.5		P	85 - 115
Cobalt	98.6		P	85 - 115
Copper	97.6		P	85 - 115
Lead	98.5		P	85 - 115
Manganese	96.9		P	85 - 115
Molybdenum	99.5		P	85 - 115
Nickel	99.1		P	85 - 115
Selenium	97.8		P	85 - 115
Silver	97.6		P	85 - 115
Thallium	98.8		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P414291

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P414295

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

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P414162

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P414282

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P414349

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: P414232

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P414047

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

Reference Method: EPA 8270E
 Batch ID: P414133

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	98.6		P	70 - 121
Alachlor	86.4		P	68 - 119
Ametryn	114		P	64 - 139
Atrazine	91.8		P	76 - 120
Atrazine Desethyl	61.7		P	44 - 126
Avobenzone	127		P	76 - 212
Azinphos Methyl	152		P	43 - 192
Azoxystrobin	113		P	36 - 224
Bromacil	76.7		P	52 - 121
Butylate	43.8		P	28 - 91.0
Caffeine	69.2		P	50 - 134
Carbophenothion	93.9		P	56 - 129
Carfentrazone Ethyl	111		P	60 - 141
Chlorfenapyr	78.2		P	56 - 115
Chlorpyrifos Ethyl	88.5		P	60 - 118
Chlorpyrifos Methyl	85.5		P	68 - 119

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P414133

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Coumaphos	148		P	18 - 250
Cyanazine	126		P	61 - 250
Cyprodinil	110		P	55 - 145
Demeton	83.0		P	30 - 159
Diazinon	99.5		P	70 - 123
Difenoconazole	57.4		P	49 - 204
Dimethenamid	79.8		P	64 - 115
Dimethomorph	95.5		P	12 - 219
Disulfoton	84.5		P	44 - 125
Dithiopyr	90.3		P	64 - 115
EPTC	55.6		P	28 - 86.0
Ethion	83.0		P	33 - 125
Ethoprop	88.1		P	64 - 116
Etridiazole	64.2		P	34 - 91.0
Fenamiphos	97.0		P	12 - 127
Fenbuconazole	146		P	59 - 151
Fipronil	97.4		P	67 - 129
Fipronil Desulfinyl	106		P	65 - 127
Fipronil Sulfide	80.8		P	61 - 116
Fipronil Sulfone	91.9		P	55 - 117
Fluazifop-P-butyl	95.9		P	62 - 127
Fludioxonil	104		P	62 - 128
Flumioxazin	158		P	33 - 250
Flutolanil	93.6		P	56 - 127
Fluxapyroxad	83.7		P	45 - 128
Fonofos	82.6		P	62 - 111
Hexazinone	97.3		P	46 - 139
Imazalil	99.7		P	38 - 142
Iprodione	90.8		P	47 - 135
Loratadine	85.3		P	10 - 244
Malathion	99.5		P	61 - 139
Metalaxyl	87.8		P	10 - 119
Metolachlor	93.9		P	65 - 118
Metribuzin	87.3		P	51 - 250
Mevinphos	73.6		P	53 - 121
Molinate	67.9		P	42 - 96.0
Myclobutanil	105		P	55 - 128
Naled	72.0		P	10 - 98.0
Napropamide	81.4		P	49 - 121
Norflurazon	108		P	61 - 126
Octinoxate	138		P	30 - 159
Oxadiazon	83.3		P	59 - 116
Oxybenzone	111		P	61 - 139
Oxyfluorfen	115		P	64 - 137
Parathion Ethyl	94.1		P	70 - 112
Parathion Methyl	95.2		P	76 - 133
Pendimethalin	97.1		P	52 - 117
Phenytol	91.0		P	10 - 199
Phorate	89.4		P	48 - 121
Prodiamine	71.9		P	26 - 142
Prometon	102		P	43 - 123
Prometryn	108		P	66 - 127

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P414133

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pronamide	101		P	75 - 121
Propanil	82.4		P	45 - 150
Propargite	143		P	42 - 208
Propiconazole	108		P	60 - 125
Pyraflufen Ethyl	105		P	70 - 138
Pyridaben	137		P	35 - 245
Pyriproxyfen	142		P	30 - 149
Simazine	85.0		P	72 - 125
Stirophos	84.4		P	29 - 164
Sulfentrazone	130		P	21 - 139
Tebuconazole	32.0		P	10 - 115
Terbufos	101		P	60 - 123
Terbuthylazine	85.4		P	72 - 115
Thiobencarb	85.5		P	31 - 139
Triadimefon	80.0		P	65 - 116

Reference Method: EPA 8321B

Batch ID: P414017

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	71.0		P	40 - 150
2,4,5-T	61.3		P	40 - 150
Acetaminophen	59.2		P	30 - 150
Acetamiprid	91.9		P	40 - 150
Afidopyropen	65.8		P	30 - 150
Bentazon	138		P	30 - 150
Benzovindiflupyr	85.8		P	40 - 150
Carbamazepine	95.5		P	40 - 150
Clothianidin	99.2		P	40 - 150
Dinotefuran	96.6		P	40 - 150
Diuron	81.8		P	40 - 150
Fenuron	101		P	40 - 150
Fluridone	71.4		P	40 - 150
Hydrocodone	92.2		P	40 - 150
Ibuprofen	70.8		P	40 - 150
Imazapyr	84.9		P	40 - 150
Imidacloprid	83.8		P	40 - 150
Linuron	68.6		P	40 - 150
Mandestrobin	75.8		P	40 - 150
MCPP	93.6		P	40 - 150
Naproxen	66.4		P	40 - 150
Primidone	90.5		P	40 - 150
Pyraclostrobin	81.1		P	40 - 150
Silvex	56.9		P	40 - 150
Thiamethoxam	97.5		P	40 - 150
Tolfenpyrad	44.6		P	30 - 150
Triclopyr	66.6		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P414089

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P414089

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	149		P	40 - 150
AMPA	101		P	40 - 150
Endothall	83.8		P	40 - 150
Glufosinate	102		P	40 - 150
Glyphosate	100		P	40 - 150
Sucralose	98.7		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P414260

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.4		P	94 - 106

Reference Method: SM 4500-F- C-2011

Batch ID: P414266

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.5		P	96 - 104

Reference Method: SM 5310 B-2011

Batch ID: P414513

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.2		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P414064

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327490	Calcium	106	106	P/P	80 - 120
2327490	Iron	104	105	P/P	80 - 120
2327490	Magnesium	104	106	P/P	80 - 120
2327490	Potassium	104	103	P/P	80 - 120
2327490	Sodium	102		P	80 - 120
2327490	Strontium	103	103	P/P	80 - 120
2327490	Tin	104	105	P/P	80 - 120
2327490	Titanium	103	103	P/P	80 - 120
2327490	Vanadium	95.1	97.1	P/P	80 - 120
2327490	Zinc	102	96.8	P/P	80 - 120
2327930	Calcium	105		P	80 - 120
2327930	Iron	110		P	80 - 120
2327930	Magnesium	109		P	80 - 120
2327930	Potassium	106		P	80 - 120
2327930	Sodium	108		P	80 - 120
2327930	Strontium	104		P	80 - 120
2327930	Tin	107		P	80 - 120
2327930	Titanium	103		P	80 - 120
2327930	Vanadium	96.8		P	80 - 120
2327930	Zinc	103		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P414064

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327490	Aluminum	97.3	97.8	P/P	80 - 120
2327490	Antimony	98.9	98.9	P/P	80 - 120
2327490	Arsenic	98.8	99.5	P/P	80 - 120
2327490	Barium	100	101	P/P	80 - 120
2327490	Beryllium	96.3	95.9	P/P	80 - 120
2327490	Boron	101	101	P/P	80 - 120
2327490	Cadmium	96.6	95.9	P/P	80 - 120
2327490	Chromium	96.8	96.8	P/P	80 - 120
2327490	Cobalt	97.7	98.0	P/P	80 - 120
2327490	Copper	97.1	97.7	P/P	80 - 120
2327490	Lead	98.9	99.5	P/P	80 - 120
2327490	Manganese	96.3	98.0	P/P	80 - 120
2327490	Molybdenum	99.2	99.4	P/P	80 - 120
2327490	Nickel	98.4	98.8	P/P	80 - 120
2327490	Selenium	97.2	97.3	P/P	80 - 120
2327490	Silver	97.6	99.0	P/P	80 - 120
2327490	Thallium	99.5	101	P/P	80 - 120
2327930	Aluminum	98.2		P	80 - 120
2327930	Antimony	97.1		P	80 - 120
2327930	Arsenic	95.1		P	80 - 120
2327930	Barium	99.0		P	80 - 120
2327930	Beryllium	91.6		P	80 - 120
2327930	Boron	98.2		P	80 - 120
2327930	Cadmium	96.7		P	80 - 120
2327930	Chromium	96.7		P	80 - 120
2327930	Cobalt	94.9		P	80 - 120
2327930	Copper	93.6		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P414064

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327930	Lead	96.6		P	80 - 120
2327930	Manganese	94.5		P	80 - 120
2327930	Molybdenum	97.9		P	80 - 120
2327930	Nickel	95.0		P	80 - 120
2327930	Selenium	92.5		P	80 - 120
2327930	Silver	97.7		P	80 - 120
2327930	Thallium	96.4		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P414291

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327859	Chloride	97.6		P	90 - 110
2327865	Chloride	96.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P414295

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327859	Sulfate	96.8		P	90 - 110
2327865	Sulfate	98.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P414162

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327789	Ammonia-N	96.6	98.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P414282

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327487	Kjeldahl Nitrogen	103	93.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P414349

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327868	NO2NO3-N	104	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P414232

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327860	Total-P	106	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P414047

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327870	O-Phosphate-P	96.1	96.7	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P414133

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327604	Acetochlor	103	104	P/P	65 - 124
2327604	Alachlor	91.2	91.4	P/P	61 - 121
2327604	Ametryn	126	133	P/P	52 - 216
2327604	Atrazine	95.8	94.6	P/P	68 - 133
2327604	Atrazine Desethyl	63.2	62.8	P/P	15 - 160
2327604	Avobenzone	118	121	P/P	59 - 206
2327604	Azinphos Methyl	151	147	P/P	40 - 292
2327604	Azoxystrobin	123	118	P/P	12 - 242
2327604	Bromacil	91.5	87.9	P/P	54 - 167
2327604	Butylate	49.4	45.7	P/P	14 - 94.0
2327604	Caffeine	84.9	90.6	P/P	10 - 226
2327604	Carbophenothion	98.9	102	P/P	49 - 122
2327604	Carfentrazone Ethyl	114	115	P/P	53 - 138
2327604	Chlorfenapyr	82.4	78.3	P/P	50 - 150
2327604	Chlorpyrifos Ethyl	95.1	94.0	P/P	52 - 122
2327604	Chlorpyrifos Methyl	93.1	94.8	P/P	66 - 117
2327604	Coumaphos	159	168	P/P	50 - 220
2327604	Cyanazine	115	113	P/P	43 - 245
2327604	Cyprodinil	122	119	P/P	50 - 150
2327604	Demeton	94.4	91.4	P/P	43 - 188
2327604	Diazinon	98.4	104	P/P	69 - 131
2327604	Difenoconazole	57.4	59.3	P/P	34 - 231
2327604	Dimethenamid	82.3	81.0	P/P	55 - 118
2327604	Dimethomorph	98.9	103	P/P	50 - 150
2327604	Disulfoton	90.6	89.5	P/P	38 - 141
2327604	Dithiopyr	96.1	91.2	P/P	42 - 116
2327604	EPTC	52.9	63.0	P/P	18 - 85.0
2327604	Ethion	86.4	83.2	P/P	10 - 131
2327604	Ethoprop	90.3	90.4	P/P	65 - 129
2327604	Etridiazole	63.8	70.3	P/P	50 - 150
2327604	Fenamiphos	108	110	P/P	31 - 137
2327604	Fenbuconazole	146	149	P/P	57 - 160
2327604	Fipronil	109	109	P/P	62 - 132
2327604	Fipronil Desulfinyl	108	108	P/P	57 - 131
2327604	Fipronil Sulfide	92.9	90.3	P/P	15 - 138
2327604	Fipronil Sulfone	100	106	P/P	21 - 134
2327604	Fluazifop-P-butyl	98.6	98.3	P/P	54 - 133
2327604	Fludioxonil	109	113	P/P	58 - 127
2327604	Flumioxazin	229	243	P/P	33 - 300
2327604	Flutolanil	99.6	102	P/P	42 - 130
2327604	Fluxapyroxad	79.9	77.8	P/P	23 - 141
2327604	Fonofos	89.4	83.3	P/P	58 - 119
2327604	Hexazinone	106	103	P/P	68 - 172
2327604	Imazalil	87.1	84.7	P/P	48 - 283
2327604	Iprodione	91.1	89.8	P/P	38 - 140
2327604	Loratadine	90.0	101	P/P	50 - 150
2327604	Malathion	112	111	P/P	40 - 137
2327604	Metalaxyl	89.1	91.8	P/P	21 - 129
2327604	Metolachlor	96.7	93.5	P/P	55 - 122
2327604	Metribuzin	90.1	101	P/P	38 - 187
2327604	Mevinphos	79.4	79.4	P/P	54 - 134
2327604	Molinate	66.3	70.5	P/P	41 - 97.0

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P414133

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327604	Myclobutanil	114	115	P/P	56 - 125
2327604	Naled	90.9	101	P/P	10 - 108
2327604	Napropamide	83.8	86.3	P/P	50 - 150
2327604	Norflurazon	110	112	P/P	32 - 122
2327604	Octinoxate	87.1	89.9	P/P	25 - 150
2327604	Oxadiazon	87.5	87.6	P/P	40 - 119
2327604	Oxybenzone	93.1	94.3	P/P	59 - 147
2327604	Oxyfluorfen	118	121	P/P	61 - 153
2327604	Parathion Ethyl	94.3	96.6	P/P	59 - 130
2327604	Parathion Methyl	104	107	P/P	65 - 155
2327604	Pendimethalin	107	109	P/P	49 - 138
2327604	Phenytoin	84.0	82.9	P/P	50 - 200
2327604	Phorate	81.6	77.8	P/P	54 - 161
2327604	Prodiamine	96.1	83.6	P/P	33 - 161
2327604	Prometon	120	104	P/P	48 - 140
2327604	Prometryn	116	118	P/P	55 - 134
2327604	Pronamide	106	108	P/P	66 - 137
2327604	Propanil	85.3	85.8	P/P	50 - 150
2327604	Propargite	145	148	P/P	50 - 200
2327604	Propiconazole	117	118	P/P	36 - 150
2327604	Pyraflufen Ethyl	112	118	P/P	50 - 150
2327604	Pyridaben	153	156	P/P	50 - 200
2327604	Pyriproxyfen	138	138	P/P	10 - 165
2327604	Simazine	96.8	94.7	P/P	57 - 145
2327604	Stirophos	94.2	91.6	P/P	50 - 150
2327604	Sulfentrazone	87.4	84.3	P/P	34 - 140
2327604	Tebuconazole	123	122	P/P	10 - 127
2327604	Terbufos	108	108	P/P	59 - 138
2327604	Terbuthylazine	90.2	89.6	P/P	68 - 119
2327604	Thiobencarb	87.3	87.0	P/P	50 - 150
2327604	Triadimefon	87.5	84.0	P/P	50 - 150

Reference Method: EPA 8321B

Batch ID: P414017

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327564	2,4-D	80.9	72.4	P/P	40 - 150
2327564	2,4,5-T	69.9	60.1	P/P	40 - 150
2327564	Acetaminophen	65.0	62.9	P/P	30 - 150
2327564	Acetamiprid	90.5	88.3	P/P	40 - 150
2327564	Afidopyropen	61.9	58.4	P/P	30 - 150
2327564	Bentazon	176	143	F/P	30 - 150
2327564	Benzovindiflupyr	100	87.0	P/P	40 - 150
2327564	Carbamazepine	112	101	P/P	40 - 150
2327564	Clothianidin	94.1	85.7	P/P	40 - 150
2327564	Dinotefuran	114	102	P/P	40 - 150
2327564	Diuron	97.3	88.1	P/P	40 - 150
2327564	Fenuron	112	98.0	P/P	40 - 150
2327564	Fluridone	83.4	75.6	P/P	40 - 150
2327564	Hydrocodone	108	98.8	P/P	40 - 150
2327564	Ibuprofen	69.7	62.9	P/P	40 - 150
2327564	Imazapyr	94.5	82.2	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P414017

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327564	Imidacloprid	110	96.4	P/P	40 - 150
2327564	Linuron	71.1	67.4	P/P	40 - 150
2327564	Mandestrobin	77.9	73.4	P/P	40 - 150
2327564	MCCP	102	82.2	P/P	40 - 150
2327564	Naproxen	74.7	59.2	P/P	40 - 150
2327564	Primidone	85.3	80.9	P/P	40 - 150
2327564	Pyraclostrobin	92.4	84.4	P/P	40 - 150
2327564	Silvex	65.8	56.4	P/P	40 - 150
2327564	Thiamethoxam	110	101	P/P	40 - 150
2327564	Tolfenpyrad	54.2	47.1	P/P	30 - 150
2327564	Triclopyr	75.3	62.8	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P414089

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327862	Acesulfame K	123	118	P/P	40 - 150
2327862	AMPA	111	104	P/P	40 - 150
2327862	Endothall	88.1	89.5	P/P	40 - 150
2327862	Glufosinate	95.8	89.4	P/P	40 - 150
2327862	Glyphosate	94.2	94.1	P/P	40 - 150
2327862	Sucralose	99.5	101	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P414266

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327557	Fluoride	97.0	97.6	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P414513

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327558	Organic Carbon	99.3	93.3	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P414040

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327762	Color (true)	0.109	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P414037

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327888	Turbidity	13.3	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P414064

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327490	Calcium	0.388	Spike	P	0 - 20
2327490	Iron	1.52	Spike	P	0 - 20
2327490	Magnesium	1.67	Spike	P	0 - 20
2327490	Potassium	0.841	Spike	P	0 - 20
2327490	Sodium	0.0480	Spike	P	0 - 20
2327490	Strontium	0.353	Spike	P	0 - 20
2327490	Tin	0.263	Spike	P	0 - 20
2327490	Titanium	0.168	Spike	P	0 - 20
2327490	Vanadium	2.02	Spike	P	0 - 20
2327490	Zinc	5.21	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P414064

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327490	Aluminum	0.503	Spike	P	0 - 20
2327490	Antimony	0.0208	Spike	P	0 - 20
2327490	Arsenic	0.666	Spike	P	0 - 20
2327490	Barium	0.822	Spike	P	0 - 20
2327490	Beryllium	0.430	Spike	P	0 - 20
2327490	Boron	0.478	Spike	P	0 - 20
2327490	Cadmium	0.684	Spike	P	0 - 20
2327490	Chromium	0.0262	Spike	P	0 - 20
2327490	Cobalt	0.322	Spike	P	0 - 20
2327490	Copper	0.597	Spike	P	0 - 20
2327490	Lead	0.564	Spike	P	0 - 20
2327490	Manganese	1.34	Spike	P	0 - 20
2327490	Molybdenum	0.155	Spike	P	0 - 20
2327490	Nickel	0.483	Spike	P	0 - 20
2327490	Selenium	0.135	Spike	P	0 - 20
2327490	Silver	1.38	Spike	P	0 - 20
2327490	Thallium	1.33	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P414291

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327859	Chloride	0.153	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P414295

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327859	Sulfate	0.00997	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P414162

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327789	Ammonia-N	1.81	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414282

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327487	Kjeldahl Nitrogen	6.40	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P414349

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327868	NO2NO3-N	3.92	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414232

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327860	Total-P	0.741	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P414047

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327870	O-Phosphate-P	0.622	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P414133

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327604	Acetochlor	1.55	Spike	P	0 - 27
2327604	Alachlor	0.235	Spike	P	0 - 27

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P414133

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327604	Ametryn	5.12	Spike	P	0 - 34
2327604	Atrazine	0.740	Spike	P	0 - 41
2327604	Atrazine Desethyl	0.674	Spike	P	0 - 38
2327604	Avobenzone	2.20	Spike	P	0 - 30
2327604	Azinphos Methyl	2.19	Spike	P	0 - 62
2327604	Azoxystrobin	4.28	Spike	P	0 - 32
2327604	Bromacil	4.03	Spike	P	0 - 30
2327604	Butylate	7.87	Spike	P	0 - 59
2327604	Caffeine	6.50	Spike	P	0 - 60
2327604	Carbophenothion	3.13	Spike	P	0 - 25
2327604	Carfentrazone Ethyl	0.533	Spike	P	0 - 26
2327604	Chlorfenapyr	5.07	Spike	P	0 - 30
2327604	Chlorpyrifos Ethyl	1.20	Spike	P	0 - 27
2327604	Chlorpyrifos Methyl	1.81	Spike	P	0 - 26
2327604	Coumaphos	5.31	Spike	P	0 - 30
2327604	Cyanazine	2.30	Spike	P	0 - 58
2327604	Cyprodinil	2.05	Spike	P	0 - 30
2327604	Demeton	3.20	Spike	P	0 - 25
2327604	Diazinon	5.40	Spike	P	0 - 29
2327604	Difenoconazole	3.26	Spike	P	0 - 25
2327604	Dimethenamid	1.45	Spike	P	0 - 30
2327604	Dimethomorph	3.59	Spike	P	0 - 30
2327604	Disulfoton	1.20	Spike	P	0 - 33
2327604	Dithiopyr	5.20	Spike	P	0 - 22
2327604	EPTC	17.3	Spike	P	0 - 38
2327604	Ethion	3.76	Spike	P	0 - 79
2327604	Ethoprop	0.0581	Spike	P	0 - 23
2327604	Etridiazole	9.77	Spike	P	0 - 30
2327604	Fenamiphos	1.77	Spike	P	0 - 58
2327604	Fenbuconazole	1.67	Spike	P	0 - 37
2327604	Fipronil	0.303	Spike	P	0 - 33
2327604	Fipronil Desulfinyl	0.263	Spike	P	0 - 26
2327604	Fipronil Sulfide	2.77	Spike	P	0 - 37
2327604	Fipronil Sulfone	5.34	Spike	P	0 - 50
2327604	Fluazifop-P-butyl	0.326	Spike	P	0 - 24
2327604	Fludioxonil	3.19	Spike	P	0 - 26
2327604	Flumioxazin	5.90	Spike	P	0 - 37
2327604	Flutolanil	2.68	Spike	P	0 - 26
2327604	Fluxapyroxad	2.61	Spike	P	0 - 34
2327604	Fonofos	7.01	Spike	P	0 - 27
2327604	Hexazinone	2.05	Spike	P	0 - 36
2327604	Imazalil	2.80	Spike	P	0 - 65
2327604	Iprodione	1.42	Spike	P	0 - 33
2327604	Loratadine	11.1	Spike	P	0 - 30
2327604	Malathion	1.07	Spike	P	0 - 44
2327604	Metalaxyl	3.00	Spike	P	0 - 38
2327604	Metolachlor	2.48	Spike	P	0 - 36
2327604	Metribuzin	11.0	Spike	P	0 - 63
2327604	Mevinphos	0.102	Spike	P	0 - 26
2327604	Molinate	6.10	Spike	P	0 - 40
2327604	Myclobutanil	1.02	Spike	P	0 - 21

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P414133

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327604	Naled	10.1	Spike	P	0 - 26
2327604	Napropamide	2.94	Spike	P	0 - 30
2327604	Norflurazon	1.89	Spike	P	0 - 24
2327604	Octinoxate	2.48	Spike	P	0 - 30
2327604	Oxadiazon	0.149	Spike	P	0 - 27
2327604	Oxybenzone	1.27	Spike	P	0 - 30
2327604	Oxyfluorfen	2.14	Spike	P	0 - 24
2327604	Parathion Ethyl	2.39	Spike	P	0 - 28
2327604	Parathion Methyl	3.34	Spike	P	0 - 27
2327604	Pendimethalin	1.30	Spike	P	0 - 31
2327604	Phenytoin	1.35	Spike	P	0 - 30
2327604	Phorate	4.85	Spike	P	0 - 27
2327604	Prodiamine	14.0	Spike	P	0 - 52
2327604	Prometon	14.9	Spike	P	0 - 31
2327604	Prometryn	0.973	Spike	P	0 - 28
2327604	Pronamide	1.62	Spike	P	0 - 26
2327604	Propanil	0.558	Spike	P	0 - 30
2327604	Propargite	1.52	Spike	P	0 - 30
2327604	Propiconazole	1.09	Spike	P	0 - 31
2327604	Pyraflufen Ethyl	5.49	Spike	P	0 - 30
2327604	Pyridaben	1.98	Spike	P	0 - 30
2327604	Pyriproxyfen	0.188	Spike	P	0 - 50
2327604	Simazine	2.21	Spike	P	0 - 29
2327604	Stiropfos	2.80	Spike	P	0 - 30
2327604	Sulfentrazone	3.57	Spike	P	0 - 33
2327604	Tebuconazole	0.547	Spike	P	0 - 44
2327604	Terbufos	0.663	Spike	P	0 - 29
2327604	Terbuthylazine	0.707	Spike	P	0 - 27
2327604	Thiobencarb	0.336	Spike	P	0 - 30
2327604	Triadimefon	4.10	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P414017

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327564	2,4-D	11.2	Spike	P	0 - 30
2327564	2,4,5-T	15.0	Spike	P	0 - 30
2327564	Acetaminophen	3.33	Spike	P	0 - 30
2327564	Acetamiprid	2.47	Spike	P	0 - 30
2327564	Afidopyropen	5.79	Spike	P	0 - 30
2327564	Bentazon	17.1	Spike	P	0 - 30
2327564	Benzovindiflupyr	14.0	Spike	P	0 - 30
2327564	Carbamazepine	10.5	Spike	P	0 - 30
2327564	Clothianidin	9.29	Spike	P	0 - 30
2327564	Dinotefuran	10.9	Spike	P	0 - 30
2327564	Diuron	10.0	Spike	P	0 - 30
2327564	Fenuron	13.0	Spike	P	0 - 30
2327564	Fluridone	8.14	Spike	P	0 - 30
2327564	Hydrocodone	9.01	Spike	P	0 - 30
2327564	Ibuprofen	10.3	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P414017

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327564	Imazapyr	13.1	Spike	P	0 - 30
2327564	Imidacloprid	13.5	Spike	P	0 - 30
2327564	Linuron	5.41	Spike	P	0 - 30
2327564	Mandestrobin	5.93	Spike	P	0 - 30
2327564	MCPPP	21.4	Spike	P	0 - 30
2327564	Naproxen	23.2	Spike	P	0 - 30
2327564	Primidone	5.29	Spike	P	0 - 30
2327564	Pyraclostrobin	8.97	Spike	P	0 - 30
2327564	Silvex	15.5	Spike	P	0 - 30
2327564	Thiamethoxam	8.31	Spike	P	0 - 30
2327564	Tolfenpyrad	14.1	Spike	P	0 - 30
2327564	Triclopyr	18.1	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P414089

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327862	Acesulfame K	3.98	Spike	P	0 - 30
2327862	AMPA	5.94	Spike	P	0 - 30
2327862	Endothall	1.58	Spike	P	0 - 30
2327862	Glufosinate	6.87	Spike	P	0 - 30
2327862	Glyphosate	0.121	Spike	P	0 - 30
2327862	Sucralose	0.699	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P414260

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327557	Total Alkalinity	0.201	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2011
Batch ID: P414428

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327859	TDS	6.32	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P414266

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327557	Fluoride	0.530	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P414513

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report

Precision

Reference Method: SM 5310 B-2011
Batch ID: P414513

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327558	Organic Carbon	5.87	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2327862
Field Sample ID: G1CE0123

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	76.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	44.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	90.2	P	30 - 160
EPA 8321B	Diuron-d6	56.4	P	30 - 160
EPA 8321B	Endothall-d6	80.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	94.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	56.2	P	30 - 160
EPA 8321B	Primidone-d5	78.3	P	30 - 160
EPA 8321B	Sucralose-d6	97.2	P	30 - 160

Lab Sample ID: 2327864
Field Sample ID: G1CE0123

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	86.8	P	20 - 200
EPA 8270E	Simazine-d10	85.8	P	71 - 140
EPA 8270E	Terbufos-d10	95.1	P	62 - 131
EPA 8270E	Terphenyl-d14	78.5	P	52 - 141

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A112229

Included Lab Sample IDs: 2327859

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

Reference Method: DEP SOP: NU-094-1

Run ID: A112230

Included Lab Sample IDs: 2327859

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A112231

Included Lab Sample IDs: 2327917

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.1	98.9	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A112284

Included Lab Sample IDs: 2327863

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.2	97.6	P/P	90 - 110
Antimony	97.6	98.2	P/P	90 - 110
Arsenic	98.7	97.5	P/P	90 - 110
Barium	97.2	97.4	P/P	90 - 110
Beryllium	95.3	93.6	P/P	90 - 110
Boron	98.0	96.2	P/P	90 - 110
Cadmium	97.3	97.3	P/P	90 - 110
Chromium	97.2	97.6	P/P	90 - 110
Cobalt	97.2	96.3	P/P	90 - 110
Copper	98.1	97.0	P/P	90 - 110
Lead	96.8	96.8	P/P	90 - 110
Manganese	97.4	97.5	P/P	90 - 110
Molybdenum	97.4	97.4	P/P	90 - 110
Nickel	98.0	96.8	P/P	90 - 110
Selenium	97.4	96.0	P/P	90 - 110
Silver	98.6	98.1	P/P	90 - 110
Thallium	97.0	96.7	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A112288

Included Lab Sample IDs: 2327860

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.8	97.9	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A112324

Included Lab Sample IDs: 2327862

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A112324
Included Lab Sample IDs: 2327862

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	91.4	89.1	P/P	50 - 150
2,4,5-T	83.7	87.8	P/P	50 - 150
Acetaminophen	105	104	P/P	60 - 160
Acetamiprid	110	108	P/P	50 - 150
Afidopyropen	91.9	89.5	P/P	50 - 150
Bentazon	101	95.5	P/P	50 - 160
Benzovindiflupyr	98.2	100	P/P	50 - 150
Carbamazepine	102	97.3	P/P	60 - 150
Clothianidin	124	113	P/P	60 - 150
Dinotefuran	98.9	100	P/P	50 - 150
Diuron	109	122	P/P	60 - 160
Fenuron	97.8	95.6	P/P	60 - 150
Fluridone	105	103	P/P	60 - 160
Hydrocodone	111	100	P/P	60 - 150
Ibuprofen	87.4	85.9	P/P	50 - 160
Imazapyr	84.2	84.0	P/P	50 - 150
Imidacloprid	93.8	87.7	P/P	60 - 150
Linuron	97.2	94.3	P/P	60 - 150
Mandestrobin	101	99.5	P/P	50 - 150
MCPP	95.3	94.0	P/P	50 - 150
Naproxen	109	85.7	P/P	50 - 160
Primidone	92.8	99.1	P/P	60 - 150
Pyraclostrobin	102	102	P/P	60 - 150
Silvex	94.0	86.2	P/P	50 - 150
Thiamethoxam	102	100	P/P	50 - 150
Tolfenpyrad	92.2	94.0	P/P	60 - 150
Triclopyr	96.2	92.2	P/P	50 - 150

Reference Method: EPA 8321B
Run ID: A112330
Included Lab Sample IDs: 2327862

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	119	126	P/P	60 - 160
Endothall	112	91.2	P/P	60 - 160
Glufosinate	105	102	P/P	60 - 160
Glyphosate	103	97.5	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A112331
Included Lab Sample IDs: 2327862

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	154	159	P/P	60 - 160
Sucralose	105	108	P/P	60 - 160

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A112342
Included Lab Sample IDs: 2327863

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A112342

Included Lab Sample IDs: 2327863

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	101	P/P	90 - 110
Iron	101	100	P/P	90 - 110
Magnesium	100	99.9	P/P	90 - 110
Potassium	101	99.5	P/P	90 - 110
Sodium	101	101	P/P	90 - 110
Strontium	101	99.0	P/P	90 - 110
Tin	104	102	P/P	90 - 110
Titanium	100	99.1	P/P	90 - 110
Vanadium	99.3	98.5	P/P	90 - 110
Zinc	102	101	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A112346

Included Lab Sample IDs: 2327859

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.4	98.6	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A112346

Included Lab Sample IDs: 2327859

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A112361

Included Lab Sample IDs: 2327859

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.7	100	P/P	90 - 110
Sulfate	101	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A112394

Included Lab Sample IDs: 2327860

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A112404

Included Lab Sample IDs: 2327860

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A112434
Included Lab Sample IDs: 2327864

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	105		P	80 - 120
Alachlor	101		P	80 - 120
Ametryn	104		P	80 - 120
Atrazine Desethyl	95.9		P	80 - 120
Azinphos Methyl	98.7		P	80 - 120
Azoxystrobin	101		P	80 - 120
Bromacil	99.8		P	80 - 120
Butylate	112		P	80 - 120
Caffeine	97.6		P	80 - 120
Carbophenothion	108		P	80 - 120
Carfentrazone Ethyl	103		P	80 - 120
Chlorfenapyr	107		P	80 - 120
Chlorpyrifos Ethyl	103		P	80 - 120
Chlorpyrifos Methyl	103		P	80 - 120
Coumaphos	100		P	80 - 120
Cyanazine	90.4		P	80 - 120
Cyprodinil	98.4		P	80 - 120
Demeton	99.2		P	80 - 120
Diazinon	99.1		P	80 - 120
Difenoconazole	100		P	80 - 120
Dimethenamid	103		P	80 - 120
Dimethomorph	95.5		P	80 - 120
Disulfoton	102		P	80 - 120
Dithiopyr	103		P	80 - 120
EPTC	96.8		P	80 - 120
Ethion	100		P	80 - 120
Ethoprop	102		P	80 - 120
Etridiazole	100		P	80 - 120
Fenamiphos	97.3		P	80 - 120
Fenbuconazole	99.7		P	80 - 120
Fipronil	106		P	80 - 120
Fipronil Sulfide	103		P	80 - 120
Fipronil Sulfone	101		P	80 - 120
Fluazifop-P-butyl	103		P	80 - 120
Fludioxonil	97.4		P	80 - 120
Flumioxazin	97.3		P	80 - 120
Flutolanil	97.9		P	80 - 120
Fluxapyroxad	101		P	80 - 120
Fonofos	95.5		P	80 - 120
Hexazinone	92.0		P	80 - 120
Imazalil	102		P	80 - 120
Iprodione	92.2		P	80 - 120
Loratadine	101		P	80 - 120
Malathion	97.4		P	80 - 120
Metalaxyl	97.7		P	80 - 120
Metolachlor	106		P	80 - 120
Metribuzin	98.6		P	80 - 120
Mevinphos	99.5		P	80 - 120
Molinate	99.5		P	80 - 120
Myclobutanil	103		P	80 - 120
Naled	105		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A112434
Included Lab Sample IDs: 2327864

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Napropamide	101		P	80 - 120
Norflurazon	98.9		P	80 - 120
Oxadiazon	108		P	80 - 120
Oxyfluorfen	95.9		P	80 - 120
Parathion Ethyl	99.0		P	80 - 120
Parathion Methyl	97.2		P	80 - 120
Pendimethalin	98.6		P	80 - 120
Phenytoin	99.1		P	80 - 120
Phorate	95.7		P	80 - 120
Prodiamine	93.4		P	80 - 120
Prometon	97.6		P	80 - 120
Prometryn	95.6		P	80 - 120
Pronamide	102		P	80 - 120
Propanil	100		P	80 - 120
Propargite	100		P	80 - 120
Propiconazole	100		P	80 - 120
Pyraflufen Ethyl	99.1		P	80 - 120
Pyridaben	101		P	80 - 120
Pyriproxyfen	102		P	80 - 120
Simazine	102		P	80 - 120
Stirophos	102		P	80 - 120
Sulfentrazone	102		P	80 - 120
Tebuconazole	96.7		P	80 - 120
Terbufos	101		P	80 - 120
Terbuthylazine	103		P	80 - 120
Thiobencarb	102		P	80 - 120
Triadimefon	100		P	80 - 120

Reference Method: SM 5310 B-2011
Run ID: A112485
Included Lab Sample IDs: 2327860

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.2	100	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A112519
Included Lab Sample IDs: 2327864

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Avobenzone	101		P	80 - 120
Octinoxate	97.1		P	80 - 120
Oxybenzone	96.1		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A112559
Included Lab Sample IDs: 2327860

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.1	102	P/P	90 - 110

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8270E
Run ID: A112615
Included Lab Sample IDs: 2327864

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	97.8		P	80 - 120
Fipronil Desulfinyl	93.7		P	80 - 120

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
DEP SOP: NU-094-1	Color (true)	100					0.109	
EPA 180.1 Rev. 2.0	Turbidity	97.0					13.3	
EPA 200.7 Rev. 4.4	Calcium	104	106	106	105			0.388
	Iron	102	104	105	110			1.52
	Magnesium	103	104	106	109			1.67
	Potassium	100	104	103	106			0.841
	Sodium	101	102	108				0.0480
	Strontium	101	103	103	104			0.353
	Tin	106	104	105	107			0.263
	Titanium	100	103	103	103			0.168
	Vanadium	92.8	95.1	97.1	96.8			2.02
	Zinc	100	102	96.8	103			5.21
EPA 200.8 Rev. 5.4	Aluminum	99.6	97.3	97.8	98.2			0.503
	Antimony	99.4	98.9	98.9	97.1			0.0208
	Arsenic	98.7	98.8	99.5	95.1			0.666
	Barium	101	100	101	99.0			0.822
	Beryllium	95.8	96.3	95.9	91.6			0.430
	Boron	104	101	101	98.2			0.478
	Cadmium	98.1	96.6	95.9	96.7			0.684
	Chromium	96.5	96.8	96.8	96.7			0.0262
	Cobalt	98.6	97.7	98.0	94.9			0.322
	Copper	97.6	97.1	97.7	93.6			0.597
	Lead	98.5	98.9	99.5	96.6			0.564
	Manganese	96.9	96.3	98.0	94.5			1.34
	Molybdenum	99.5	99.2	99.4	97.9			0.155
	Nickel	99.1	98.4	98.8	95.0			0.483
	Selenium	97.8	97.2	97.3	92.5			0.135
	Silver	97.6	97.6	99.0	97.7			1.38
	Thallium	98.8	99.5	101	96.4			1.33
EPA 300.0 Rev. 2.1	Chloride	100	97.6	96.5			0.153	
	Sulfate	101	96.8	98.1			0.0099	
EPA 350.1 Rev. 2.0	Ammonia-N	99.4	96.6	98.6				1.81
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	94.1	103	93.8				6.40
EPA 353.2 Rev. 2.0	NO2NO3-N	102	104	100				3.92
EPA 365.1 Rev. 2.0	Total-P	102	106	105				0.741
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102	96.1	96.7				0.622
EPA 8270E	Acetochlor	98.6	103	104				1.55
	Alachlor	86.4	91.2	91.4				0.235
	Ametryn	114	126	133				5.12
	Atrazine	91.8	95.8	94.6				0.740
	Atrazine Desethyl	61.7	63.2	62.8				0.674
	Avobenzone	127	118	121				2.20
	Azinphos Methyl	152	151	147				2.19
	Azoxystrobin	113	123	118				4.28
	Bromacil	76.7	91.5	87.9				4.03
	Butylate	43.8	49.4	45.7				7.87
	Caffeine	69.2	84.9	90.6				6.50
	Carbophenothion	93.9	98.9	102				3.13
	Carfentrazone Ethyl	111	114	115				0.533
	Chlorfenapyr	78.2	82.4	78.3				5.07
	Chlorpyrifos Ethyl	88.5	95.1	94.0				1.20
	Chlorpyrifos Methyl	85.5	93.1	94.8				1.81
	Coumaphos	148	159	168				5.31
	Cyanazine	126	115	113				2.30

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8270E	Cyprodinil	110	122	119		2.05
	Demeton	83.0	94.4	91.4		3.20
	Diazinon	99.5	98.4	104		5.40
	Difenoconazole	57.4	57.4	59.3		3.26
	Dimethenamid	79.8	82.3	81.0		1.45
	Dimethomorph	95.5	98.9	103		3.59
	Disulfoton	84.5	90.6	89.5		1.20
	Dithiopyr	90.3	96.1	91.2		5.20
	EPTC	55.6	52.9	63.0		17.3
	Ethion	83.0	86.4	83.2		3.76
	Ethoprop	88.1	90.3	90.4		0.0581
	Etridiazole	64.2	63.8	70.3		9.77
	Fenamiphos	97.0	108	110		1.77
	Fenbuconazole	146	146	149		1.67
	Fipronil	97.4	109	109		0.303
	Fipronil Desulfinyl	106	108	108		0.263
	Fipronil Sulfide	80.8	92.9	90.3		2.77
	Fipronil Sulfone	91.9	100	106		5.34
	Fluazifop-P-butyl	95.9	98.6	98.3		0.326
	Fludioxonil	104	109	113		3.19
	Flumioxazin	158	229	243		5.90
	Flutolanil	93.6	99.6	102		2.68
	Fluxapyroxad	83.7	79.9	77.8		2.61
	Fonofos	82.6	89.4	83.3		7.01
	Hexazinone	97.3	106	103		2.05
	Imazalil	99.7	87.1	84.7		2.80
	Iprodione	90.8	91.1	89.8		1.42
	Loratadine	85.3	90.0	101		11.1
	Malathion	99.5	112	111		1.07
	Metalaxyl	87.8	89.1	91.8		3.00
	Metolachlor	93.9	96.7	93.5		2.48
	Metribuzin	87.3	90.1	101		11.0
	Mevinphos	73.6	79.4	79.4		0.102
	Molinate	67.9	66.3	70.5		6.10
	Myclobutanil	105	114	115		1.02
	Naled	72.0	90.9	101		10.1
	Napropamide	81.4	83.8	86.3		2.94
	Norflurazon	108	110	112		1.89
	Octinoxate	138	87.1	89.9		2.48
	Oxadiazon	83.3	87.5	87.6		0.149
	Oxybenzone	111	93.1	94.3		1.27
	Oxyfluorfen	115	118	121		2.14
	Parathion Ethyl	94.1	94.3	96.6		2.39
	Parathion Methyl	95.2	104	107		3.34
	Pendimethalin	97.1	107	109		1.30
	Phenytol	91.0	84.0	82.9		1.35
	Phorate	89.4	81.6	77.8		4.85
	Prodiamine	71.9	96.1	83.6		14.0
	Prometon	102	120	104		14.9
	Prometryn	108	116	118		0.973
	Pronamide	101	106	108		1.62
	Propanil	82.4	85.3	85.8		0.558
	Propargite	143	145	148		1.52
	Propiconazole	108	117	118		1.09

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8270E	Pyraflufen Ethyl	105	112	118			5.49
	Pyridaben	137	153	156			1.98
	Pyriproxyfen	142	138	138			0.188
	Simazine	85.0	96.8	94.7			2.21
	Stirophos	84.4	94.2	91.6			2.80
	Sulfentrazone	130	87.4	84.3			3.57
	Tebuconazole	32.0	123	122			0.547
	Terbufos	101	108	108			0.663
	Terbutylazine	85.4	90.2	89.6			0.707
	Thiobencarb	85.5	87.3	87.0			0.336
	Triadimefon	80.0	87.5	84.0			4.10
	2,4-D	71.0	80.9	72.4			11.2
EPA 8321B	2,4,5-T	61.3	69.9	60.1			15.0
	Acesulfame K	149	123	118			3.98
	Acetaminophen	59.2	65.0	62.9			3.33
	Acetamiprid	91.9	90.5	88.3			2.47
	Afidopyropen	65.8	61.9	58.4			5.79
	AMPA	101	111	104			5.94
	Bentazon	138	176	143			17.1
	Benzovindiflupyr	85.8	100	87.0			14.0
	Carbamazepine	95.5	112	101			10.5
	Clothianidin	99.2	94.1	85.7			9.29
	Dinotefuran	96.6	114	102			10.9
	Diuron	81.8	97.3	88.1			10.0
	Endothall	83.8	88.1	89.5			1.58
	Fenuron	101	112	98.0			13.0
	Fluridone	71.4	83.4	75.6			8.14
	Glufosinate	102	95.8	89.4			6.87
	Glyphosate	100	94.2	94.1			0.121
	Hydrocodone	92.2	108	98.8			9.01
	Ibuprofen	70.8	69.7	62.9			10.3
	Imazapyr	84.9	94.5	82.2			13.1
	Imidacloprid	83.8	110	96.4			13.5
	Linuron	68.6	71.1	67.4			5.41
	Mandestrobin	75.8	77.9	73.4			5.93
	MCPP	93.6	102	82.2			21.4
	Naproxen	66.4	74.7	59.2			23.2
	Primidone	90.5	85.3	80.9			5.29
	Pyraclostrobin	81.1	92.4	84.4			8.97
	Silvex	56.9	65.8	56.4			15.5
	Sucralose	98.7	99.5	101			0.699
	Thiamethoxam	97.5	110	101			8.31
	Tolfenpyrad	44.6	54.2	47.1			14.1
	Triclopyr	66.6	75.3	62.8			18.1
SM 2320 B-2011	Total Alkalinity	98.4				0.201	
SM 2540 C-2011	TDS					6.32	
SM 4500-F- C-2011	Fluoride	96.5	97.0	97.6			0.530
SM 5310 B-2011	Organic Carbon	98.2	99.3	93.3			5.87

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2327859

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2327859
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2327863
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2327863
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2327859
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2327859
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2327860
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2327860
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2327860
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2327860
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2327917
EPA 8270E	Analysis of Sunscreen Compounds in Water by GC/MS-SIM	2327864
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2327864
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2327862
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2327859
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2327863
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2327859
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2327859
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2327859
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2327860

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	05/18/2022			05/18/2022 15:50	Sarah A Nixon	2327859
EPA 180.1 Rev. 2.0	05/18/2022			05/18/2022 14:56	Khloe J Berg	2327859
EPA 200.7 Rev. 4.4	05/18/2022	05/19/2022 10:15	Megan Whitefoot	05/23/2022 14:55	Josef B Mick	2327863
EPA 200.8 Rev. 5.4	05/18/2022	05/19/2022 10:15	Megan Whitefoot	05/19/2022 20:47	Alexander Thompson	2327863
EPA 300.0 Rev. 2.1	05/18/2022			05/24/2022 01:08	Anna M. Plaviak	2327859
EPA 350.1 Rev. 2.0	05/18/2022			05/20/2022 11:19	Judith K. Clark	2327860
EPA 351.2 Rev. 2.0	05/18/2022	05/25/2022 12:34	Samantha L Bates	06/01/2022 13:07	Alexandra J Mattheus	2327860
EPA 353.2 Rev. 2.0	05/18/2022			05/25/2022 11:02	Beverly Y. Sanders	2327860
EPA 365.1 Rev. 2.0	05/18/2022	05/24/2022 03:30	Adam P Silver	05/25/2022 15:13	James L Waggerby	2327860
EPA 365.1 Rev. 2.0 dissolved	05/18/2022			05/18/2022 17:01	Nathaniel J Jones	2327917
EPA 8270E	05/18/2022	05/23/2022 08:00	Rasheda Ghaffari	05/25/2022 23:25	Vandana T. Nagar	2327864
	05/18/2022	05/23/2022 08:00	Rasheda Ghaffari	05/27/2022 21:21	Lipi Saha	2327864
	05/18/2022	05/23/2022 08:00	Rasheda Ghaffari	06/03/2022 15:23	Vandana T. Nagar	2327864
	05/18/2022	05/23/2022 08:00	Rasheda Ghaffari	06/03/2022 18:30	Vandana T. Nagar	2327864
EPA 8321B	05/18/2022	05/19/2022 10:00	June Rhew	05/21/2022 07:57	Juyoung Kim	2327862
	05/18/2022	05/20/2022 14:00	Manjita Shrestha	05/21/2022 18:49	Manjita Shrestha	2327862
	05/18/2022	05/20/2022 14:00	Manjita Shrestha	05/22/2022 08:58	Manjita Shrestha	2327862
SM 2320 B-2011	05/18/2022			05/21/2022 09:34	Dale L. Simmons	2327859
SM 2340 B-2011	05/18/2022			05/23/2022 14:55	Josef B Mick	2327863
SM 2540 C-2011	05/18/2022			05/20/2022 16:02	Yijie Li	2327859
SM 2540 D-2011	05/18/2022			05/20/2022 16:02	Yijie Li	2327859
SM 4500-F- C-2011	05/18/2022			05/21/2022 09:34	Dale L. Simmons	2327859
SM 5310 B-2011	05/18/2022			05/20/2022 21:18	Judith K. Clark	2327860