

Chemical Analysis Report

NE-DIST-2022-04-28-01

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

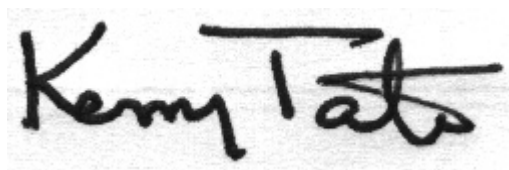
Event Description: **Calf Creek SCI and Moncrief SCI**
Request ID: **RQ-2022-04-18-15**
Customer: **NE-DIST**
Project ID: **SMP**

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

Date Certified: 24-MAY-2022 09:56

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

Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: Calf Creek 0.5mi upstream of SE27th

Collection Date/Time: 04/27/2022 12:35

Field ID: G1NE0934

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2323001	DEP SOP: NU-094-1	Color (true)**	97		PCU	P413074	
	EPA 180.1 Rev. 2.0	Turbidity	3.3		NTU	P413079	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P413492	
		Sulfate	9.3		mg SO4/L	P413495	
	SM 2320 B-2011	Total Alkalinity	91		mg CaCO3/L	P413565	
	SM 2540 C-2011	TDS	172	A	mg/L	P413671	
	SM 2540 D-2011	TSS	2	UA	mg/L	P413229	
	SM 4500-F- C-2011	Fluoride	0.15		mg F/L	P413567	
2323002	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P413434	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.49		mg N/L	P413480	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.41		mg N/L	P413401	
	EPA 365.1 Rev. 2.0	Total-P	0.081		mg P/L	P413407	
	SM 5310 B-2011	Organic Carbon	15		mg C/L	P413568	
2323003	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.062		mg P/L	P413077	
2323007	EPA 8321B	2,4-D	0.015		ug/L	P413103	
		Acesulfame K	0.10	UJ	ug/L	P413045	LCS
		2,4,5-T	0.0040	U	ug/L	P413103	
		AMPA	0.11	I	ug/L	P413045	
		Acetaminophen	0.0080	U	ug/L	P413103	
		Endothall	0.25	U	ug/L	P413045	
		Acetamiprid	0.020	U	ug/L	P413103	MS, RPD
		Glufosinate	0.10	U	ug/L	P413045	
		Glyphosate	0.10	U	ug/L	P413045	
		Afidopyropen	0.020	U	ug/L	P413103	MS, RPD
		Bentazon	0.0063		ug/L	P413103	
		Sucralose	0.085		ug/L	P413045	
		Benzovindiflupyr	0.020	U	ug/L	P413103	
		Carbamazepine	8.0E-04	U	ug/L	P413103	
		Clothianidin	0.020	U	ug/L	P413103	
		Dinotefuran	0.020	U	ug/L	P413103	
		Diuron	0.020	U	ug/L	P413103	MS
		Fenuron	0.32	U	ug/L	P413103	
		Fluridone	0.0080	U	ug/L	P413103	
		Imazapyr	0.0081	I	ug/L	P413103	
		Hydrocodone	0.0020	U	ug/L	P413103	
		Ibuprofen	0.020	U	ug/L	P413103	
		Imidacloprid	0.020	U	ug/L	P413103	MS
		Linuron	0.040	U	ug/L	P413103	
		Mandestrobin	0.020	U	ug/L	P413103	
		MCP	0.0040	U	ug/L	P413103	
		Naproxen	0.0080	U	ug/L	P413103	
		Primidone	0.0040	U	ug/L	P413103	
		Pyraclostrobin	0.020	U	ug/L	P413103	

Field ID: G1NE0934

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2323007	EPA 8321B	Thiamethoxam	0.020	U	ug/L	P413103	MS
		Tolfenpyrad	0.020	U	ug/L	P413103	
		Triclopyr	0.0040	U	ug/L	P413103	
2323008	EPA 200.7 Rev. 4.4	Calcium	34.7		mg/L	P413179	
		Iron	490		ug/L	P413179	
		Magnesium	7.98		mg/L	P413179	
		Potassium	0.56	I	mg/L	P413179	
		Sodium	8.1		mg/L	P413179	
		Strontium	67.6		ug/L	P413179	
		Tin	3.0	U	ug/L	P413179	
		Titanium	2.5	I	ug/L	P413179	
		Vanadium	2.6	I	ug/L	P413179	
		Zinc	5.0	U	ug/L	P413179	
	EPA 200.8 Rev. 5.4	Aluminum	184		ug/L	P413179	
		Antimony	0.072	I	ug/L	P413179	
		Arsenic	1.34		ug/L	P413179	
		Barium	12.0		ug/L	P413179	
		Beryllium	0.015	I	ug/L	P413179	
		Boron**	32.6		ug/L	P413179	
		Cadmium	0.020	U	ug/L	P413179	
		Chromium	0.81	I	ug/L	P413179	
		Cobalt	0.168		ug/L	P413179	
		Copper	0.40	U	ug/L	P413179	
		Lead	0.21	I	ug/L	P413179	
		Manganese	15.2		ug/L	P413179	
		Molybdenum	0.62		ug/L	P413179	
		Nickel	0.50	I	ug/L	P413179	
		Selenium	0.20	U	ug/L	P413179	
		Silver	0.010	U	ug/L	P413179	
		Thallium	0.10	U	ug/L	P413179	
	SM 2340 B-2011	Hardness	120		mg/L	P413179	
2323009	EPA 8270E	Oxybenzone**	10	U	ng/L	P413158	
		Acetochlor	0.26	U	ng/L	P413158	
		Octinoxate**	21	U	ng/L	P413158	
		Alachlor	0.26	U	ng/L	P413158	
		Avobenzone**	100	U	ng/L	P413158	
		Ametryn	0.63	U	ng/L	P413158	
		Atrazine	0.34	I	ng/L	P413158	
		Atrazine Desethyl	1.6	U	ng/L	P413158	
		Azinphos Methyl	2.1	U	ng/L	P413158	
		Azoxystrobin**	0.52	U	ng/L	P413158	
		Bromacil	0.52	U	ng/L	P413158	
		Butylate	0.42	U	ng/L	P413158	
		Caffeine**	7.9	U	ng/L	P413158	
		Carbophenothion	0.21	U	ng/L	P413158	

Field ID: G1NE0934

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2323009	EPA 8270E	Carfentrazone Ethyl**	0.10	U	ng/L	P413158	
		Chlorfenapyr**	0.18	U	ng/L	P413158	
		Chlorpyrifos Ethyl	0.26	U	ng/L	P413158	
		Chlorpyrifos Methyl	0.052	U	ng/L	P413158	
		Coumaphos**	0.52	U	ng/L	P413158	
		Cyanazine	3.4	U	ng/L	P413158	
		Cyprodinil**	0.10	U	ng/L	P413158	
		Demeton	1.6	U	ng/L	P413158	
		Diazinon	0.13	U	ng/L	P413158	
		Difenoconazole**	0.63	U	ng/L	P413158	
		Dimethenamid**	0.10	U	ng/L	P413158	
		Dimethomorph**	0.18	U	ng/L	P413158	
		Disulfoton	0.52	U	ng/L	P413158	
		Dithiopyr**	0.18	U	ng/L	P413158	
		EPTC	1.3	U	ng/L	P413158	
		Ethion	0.16	U	ng/L	P413158	
		Ethoprop	0.10	U	ng/L	P413158	
		Etridiazole**	0.16	U	ng/L	P413158	
		Fenamiphos	0.52	U	ng/L	P413158	
		Fenbuconazole**	0.13	U	ng/L	P413158	
		Fipronil	0.26	U	ng/L	P413158	
		Fipronil Desulfinyl**	0.13	U	ng/L	P413158	
		Fipronil Sulfide	1.7		ng/L	P413158	
		Fipronil Sulfone	2.6		ng/L	P413158	
		Fluazifop-P-butyl**	0.10	U	ng/L	P413158	
		Fludioxonil**	0.13	U	ng/L	P413158	
		Flumioxazin**	1.8	U	ng/L	P413158	
		Flutolanil**	0.10	U	ng/L	P413158	
		Fluxapyroxad**	0.10	U	ng/L	P413158	
		Fonofos	0.21	U	ng/L	P413158	
		Hexazinone	0.52	U	ng/L	P413158	
		Imazalil**	0.79	U	ng/L	P413158	
		Iprodione**	0.63	U	ng/L	P413158	
		Loratadine**	0.10	U	ng/L	P413158	
		Malathion	0.37	U	ng/L	P413158	
		Metalaxyl	0.79	U	ng/L	P413158	
		Metolachlor	0.37	U	ng/L	P413158	
		Metribuzin	2.6	U	ng/L	P413158	
		Mevinphos	1.1	U	ng/L	P413158	
		Molinate	0.31	U	ng/L	P413158	
		Myclobutanil**	0.26	U	ng/L	P413158	
		Naled**	1.6	U	ng/L	P413158	
		Napropamide**	0.42	U	ng/L	P413158	
		Norflurazon	0.52	U	ng/L	P413158	
		Oxadiazon	0.31	U	ng/L	P413158	

Field ID: G1NE0934

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2323009	EPA 8270E	Oxyfluorfen**	0.16	U	ng/L	P413158	
		Parathion Ethyl	0.26	U	ng/L	P413158	
		Parathion Methyl	0.58	U	ng/L	P413158	
		Pendimethalin	1.0	U	ng/L	P413158	
		Phenytol**	3.7	U	ng/L	P413158	
		Phorate	0.55	U	ng/L	P413158	
		Prodiamine**	0.18	U	ng/L	P413158	
		Prometon	0.94	U	ng/L	P413158	
		Prometryn	0.21	U	ng/L	P413158	
		Pronamide**	0.16	U	ng/L	P413158	
		Propanil**	0.13	U	ng/L	P413158	
		Propargite**	1.6	U	ng/L	P413158	
		Propiconazole**	0.52	U	ng/L	P413158	
		Pyraflufen Ethyl**	0.26	U	ng/L	P413158	
		Pyridaben**	0.47	U	ng/L	P413158	
		Pyriproxyfen**	0.13	U	ng/L	P413158	
		Simazine	0.52	U	ng/L	P413158	
		Stirophos**	0.13	U	ng/L	P413158	
		Sulfentrazone**	1.5	I	ng/L	P413158	
		Tebuconazole**	0.52	U	ng/L	P413158	
		Terbufos	0.10	U	ng/L	P413158	
		Terbutylazine	0.45	U	ng/L	P413158	
		Thiobencarb**	0.63	U	ng/L	P413158	
		Triadimefon**	0.26	U	ng/L	P413158	

Ref. Method and Comment:

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

EPA 8321B: MDL for some parameters elevated due to matrix interference. MS accuracy for imazapyr could not be assessed due to high concentration of parameter in the spiked sample.

EPA 8321B: 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: P413074

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P413079

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P413179

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: P413179

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: P413492

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: P413495

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413434

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413480

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413401

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413407

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P413077

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

Reference Method: EPA 8270E
Batch ID: P413158

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: P413158

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: P413158

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: P413158

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: P413045

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P413045

Component	Result	Code	Units
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: P413103

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	0.020	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
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2320 B-2011

Batch ID: P413565

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

Reference Method: SM 2540 C-2011

Batch ID: P413671

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P413229

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P413567

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P413568

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: P413074

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: P413079

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	95.8		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P413179

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	107		P	85 - 115
Iron	108		P	85 - 115
Magnesium	109		P	85 - 115
Potassium	101		P	85 - 115
Sodium	112		P	85 - 115
Strontium	113		P	85 - 115
Tin	98.3		P	85 - 115
Titanium	97.0		P	85 - 115
Vanadium	91.1		P	85 - 115
Zinc	105		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P413179

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.5		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	99.7		P	85 - 115
Barium	105		P	85 - 115
Beryllium	98.1		P	85 - 115
Boron	101		P	85 - 115
Cadmium	98.8		P	85 - 115
Chromium	97.7		P	85 - 115
Cobalt	98.5		P	85 - 115
Copper	97.7		P	85 - 115
Lead	99.3		P	85 - 115
Manganese	98.4		P	85 - 115
Molybdenum	99.5		P	85 - 115
Nickel	99.1		P	85 - 115
Selenium	97.7		P	85 - 115
Silver	97.2		P	85 - 115
Thallium	103		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413492

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.9		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413495

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413434

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413480

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.1		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413401

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413407

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P413077

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.2		P	90 - 110

Reference Method: EPA 8270E
Batch ID: P413158

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	107		P	70 - 121
Alachlor	97.1		P	68 - 119
Ametryn	79.1		P	64 - 139
Atrazine	113		P	76 - 120
Atrazine Desethyl	77.6		P	44 - 126
Avobenzone	108		P	59 - 206
Azinphos Methyl	104		P	43 - 192
Azoxystrobin	104		P	36 - 224
Bromacil	77.1		P	52 - 121
Butylate	39.4		P	28 - 91.0
Caffeine	88.2		P	50 - 134
Carbophenothion	112		P	56 - 129
Carfentrazone Ethyl	109		P	60 - 141
Chlorfenapyr	103		P	56 - 115
Chlorpyrifos Ethyl	103		P	60 - 118
Chlorpyrifos Methyl	109		P	68 - 119

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P413158

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Coumaphos	97.8		P	18 - 250
Cyanazine	97.7		P	61 - 250
Cyprodinil	122		P	55 - 145
Demeton	92.8		P	30 - 159
Diazinon	119		P	70 - 123
Difenoconazole	147		P	49 - 204
Dimethenamid	89.5		P	64 - 115
Dimethomorph	97.3		P	12 - 219
Disulfoton	111		P	44 - 125
Dithiopyr	97.3		P	64 - 115
EPTC	43.9		P	28 - 86.0
Ethion	82.8		P	33 - 125
Ethoprop	103		P	64 - 116
Etridiazole	53.3		P	34 - 91.0
Fenamiphos	109		P	12 - 127
Fenbuconazole	86.7		P	59 - 151
Fipronil	116		P	67 - 129
Fipronil Desulfinyl	110		P	65 - 127
Fipronil Sulfide	107		P	61 - 116
Fipronil Sulfone	104		P	55 - 117
Fluazifop-P-butyl	123		P	62 - 127
Fludioxonil	103		P	62 - 128
Flumioxazin	136		P	33 - 250
Flutolanil	78.8		P	56 - 127
Fluxapyroxad	88.5		P	45 - 128
Fonofos	102		P	62 - 111
Hexazinone	94.7		P	46 - 139
Imazalil	133		P	38 - 142
Iprodione	98.5		P	47 - 135
Loratadine	84.5		P	10 - 244
Malathion	96.9		P	61 - 139
Metalaxyl	95.1		P	10 - 119
Metolachlor	86.1		P	65 - 118
Metribuzin	89.0		P	51 - 250
Mevinphos	92.3		P	53 - 121
Molinate	75.2		P	42 - 96.0
Myclobutanil	93.0		P	55 - 128
Naled	95.7		P	10 - 98.0
Napropamide	78.2		P	49 - 121
Norflurazon	87.6		P	61 - 126
Octinoxate	70.4		P	25 - 150
Oxadiazon	81.7		P	59 - 116
Oxybenzone	77.6		P	59 - 147
Oxyfluorfen	128		P	64 - 137
Parathion Ethyl	96.8		P	70 - 112
Parathion Methyl	124		P	76 - 133
Pendimethalin	92.9		P	52 - 117
Phenytol	39.1		P	10 - 199
Phorate	102		P	48 - 121
Prodiamine	49.5		P	26 - 142
Prometon	90.9		P	43 - 123
Prometryn	82.1		P	66 - 127

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P413158

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pronamide	105		P	75 - 121
Propanil	90.9		P	45 - 150
Propargite	62.1		P	42 - 208
Propiconazole	92.0		P	60 - 125
Pyraflufen Ethyl	98.5		P	70 - 138
Pyridaben	89.3		P	35 - 245
Pyriproxyfen	85.2		P	30 - 149
Simazine	82.4		P	72 - 125
Stirophos	66.6		P	29 - 164
Sulfentrazone	66.0		P	21 - 139
Tebuconazole	54.4		P	10 - 115
Terbufos	111		P	60 - 123
Terbuthylazine	87.0		P	72 - 115
Thiobencarb	74.4		P	31 - 139
Triadimefon	102		P	65 - 116

Reference Method: EPA 8321B

Batch ID: P413045

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	155		F	40 - 150
AMPA	91.6		P	40 - 150
Endothall	85.3		P	40 - 150
Glufosinate	91.1		P	40 - 150
Glyphosate	91.6		P	40 - 150
Sucralose	117		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P413103

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	83.8		P	40 - 150
2,4,5-T	83.8		P	40 - 150
Acetaminophen	92.3		P	30 - 150
Acetamiprid	66.2		P	40 - 150
Afidopyropen	45.5		P	40 - 150
Bentazon	77.6		P	30 - 150
Benzovindiflupyr	68.9		P	40 - 150
Carbamazepine	65.1		P	40 - 150
Clothianidin	94.1		P	40 - 150
Dinotefuran	108		P	40 - 150
Diuron	73.7		P	40 - 150
Fenuron	96.4		P	40 - 150
Fluridone	77.5		P	40 - 150
Hydrocodone	93.5		P	40 - 150
Ibuprofen	71.5		P	40 - 150
Imazapyr	80.1		P	40 - 150
Imidacloprid	77.4		P	40 - 150
Linuron	71.1		P	40 - 150
Mandestrobin	71.1		P	40 - 150
MCPP	94.9		P	40 - 150
Naproxen	62.4		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P413103

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Primidone	97.4		P	40 - 150
Pyraclostrobin	60.6		P	40 - 150
Thiamethoxam	84.9		P	40 - 150
Tolfenpyrad	34.5		P	30 - 150
Triclopyr	102		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P413565

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.3		P	94 - 106

Reference Method: SM 4500-F- C-2011

Batch ID: P413567

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.7		P	93 - 104

Reference Method: SM 5310 B-2011

Batch ID: P413568

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P413179

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322974	Calcium	104		P	80 - 120
2322974	Iron	105		P	80 - 120
2322974	Magnesium	107		P	80 - 120
2322974	Potassium	97.9		P	80 - 120
2322974	Sodium	95.1		P	80 - 120
2322974	Strontium	99.0		P	80 - 120
2322974	Tin	98.4		P	80 - 120
2322974	Titanium	101		P	80 - 120
2322974	Vanadium	94.4		P	80 - 120
2322974	Zinc	101		P	80 - 120
2322975	Calcium	110	107	P/P	80 - 120
2322975	Iron	111	106	P/P	80 - 120
2322975	Magnesium	113	109	P/P	80 - 120
2322975	Potassium	103	99.9	P/P	80 - 120
2322975	Sodium	104	101	P/P	80 - 120
2322975	Strontium	101	99.4	P/P	80 - 120
2322975	Tin	102	99.8	P/P	80 - 120
2322975	Titanium	105	103	P/P	80 - 120
2322975	Vanadium	98.3	96.0	P/P	80 - 120
2322975	Zinc	103	101	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P413179

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322974	Aluminum	99.3		P	80 - 120
2322974	Antimony	101		P	80 - 120
2322974	Arsenic	96.0		P	80 - 120
2322974	Barium	101		P	80 - 120
2322974	Beryllium	92.8		P	80 - 120
2322974	Boron	102		P	80 - 120
2322974	Cadmium	99.8		P	80 - 120
2322974	Chromium	96.4		P	80 - 120
2322974	Cobalt	93.1		P	80 - 120
2322974	Copper	93.3		P	80 - 120
2322974	Lead	98.7		P	80 - 120
2322974	Manganese	97.6		P	80 - 120
2322974	Molybdenum	97.5		P	80 - 120
2322974	Nickel	94.4		P	80 - 120
2322974	Selenium	94.1		P	80 - 120
2322974	Silver	94.8		P	80 - 120
2322974	Thallium	101		P	80 - 120
2322975	Aluminum	99.0	99.4	P/P	80 - 120
2322975	Antimony	100	101	P/P	80 - 120
2322975	Arsenic	96.7	97.6	P/P	80 - 120
2322975	Barium	102	103	P/P	80 - 120
2322975	Beryllium	93.9	93.7	P/P	80 - 120
2322975	Boron	100	101	P/P	80 - 120
2322975	Cadmium	98.3	98.7	P/P	80 - 120
2322975	Chromium	97.1	97.9	P/P	80 - 120
2322975	Cobalt	93.8	95.1	P/P	80 - 120
2322975	Copper	93.2	94.1	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P413179

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322975	Lead	98.3	99.0	P/P	80 - 120
2322975	Manganese	98.6	99.1	P/P	80 - 120
2322975	Molybdenum	97.9	98.4	P/P	80 - 120
2322975	Nickel	95.1	95.3	P/P	80 - 120
2322975	Selenium	93.5	95.0	P/P	80 - 120
2322975	Silver	95.0	96.3	P/P	80 - 120
2322975	Thallium	101	102	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413492

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322944	Chloride	97.6		P	90 - 110
2323001	Chloride	97.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413495

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322944	Sulfate	98.5		P	90 - 110
2323001	Sulfate	95.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413434

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322947	Ammonia-N	103	106	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413480

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322832	Kjeldahl Nitrogen	91.6	88.7	P/F	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413401

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322945	NO2NO3-N	98.6	99.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413407

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2323002	Total-P	101	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P413077

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2323003	O-Phosphate-P	98.1	98.2	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P413158

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322917	Acetochlor	98.8	88.0	P/P	65 - 124
2322917	Alachlor	110	102	P/P	61 - 121
2322917	Ametryn	91.3	91.3	P/P	52 - 216
2322917	Atrazine	116	116	P/P	68 - 133
2322917	Atrazine Desethyl	108	77.5	P/P	15 - 160
2322917	Avobenzone	114	111	P/P	59 - 206
2322917	Azinphos Methyl	114	103	P/P	40 - 292
2322917	Azoxystrobin	100	101	P/P	12 - 242
2322917	Bromacil	73.5	87.6	P/P	54 - 167
2322917	Butylate	35.6	45.3	P/P	14 - 94.0
2322917	Caffeine	12.9	20.6	P/P	10 - 226
2322917	Carbophenothion	105	94.5	P/P	49 - 122
2322917	Carfentrazone Ethyl	112	98.9	P/P	53 - 138
2322917	Chlorfenapyr	97.5	85.9	P/P	50 - 150
2322917	Chlorpyrifos Ethyl	94.6	86.5	P/P	52 - 122
2322917	Chlorpyrifos Methyl	115	111	P/P	66 - 117
2322917	Coumaphos	79.2	94.2	P/P	50 - 220
2322917	Cyanazine	97.8	98.5	P/P	43 - 245
2322917	Cyprodinil	114	104	P/P	50 - 150
2322917	Demeton	96.3	86.2	P/P	43 - 188
2322917	Diazinon	117	125	P/P	69 - 131
2322917	Difenoconazole	152	135	P/P	34 - 231
2322917	Dimethenamid	97.2	85.4	P/P	55 - 118
2322917	Dimethomorph	97.5	111	P/P	50 - 150
2322917	Disulfoton	111	101	P/P	38 - 141
2322917	Dithiopyr	105	96.4	P/P	42 - 116
2322917	EPTC	59.8	67.8	P/P	18 - 85.0
2322917	Ethion	86.9	64.3	P/P	10 - 131
2322917	Ethoprop	95.6	97.4	P/P	65 - 129
2322917	Etridiazole	65.3	69.2	P/P	50 - 150
2322917	Fenamiphos	65.4	79.1	P/P	31 - 137
2322917	Fenbuconazole	89.3	93.6	P/P	57 - 160
2322917	Fipronil	120	109	P/P	62 - 132
2322917	Fipronil Desulfinyl	127	118	P/P	57 - 131
2322917	Fipronil Sulfide	97.7	92.2	P/P	15 - 138
2322917	Fipronil Sulfone	113	98.9	P/P	21 - 134
2322917	Fluazifop-P-butyl	111	103	P/P	54 - 133
2322917	Fludioxonil	105	100	P/P	58 - 127
2322917	Flumioxazin	169	151	P/P	33 - 300
2322917	Flutolanil	79.9	78.4	P/P	42 - 130
2322917	Fluxapyroxad	90.7	83.5	P/P	23 - 141
2322917	Fonofos	99.4	108	P/P	58 - 119
2322917	Hexazinone	99.9	90.4	P/P	68 - 172
2322917	Imazalil	84.9	84.1	P/P	48 - 283
2322917	Iprodione	100	106	P/P	38 - 140
2322917	Loratadine	85.7	90.0	P/P	50 - 150
2322917	Malathion	87.4	89.3	P/P	40 - 137
2322917	Metalaxyl	100	98.7	P/P	21 - 129
2322917	Metolachlor	93.2	89.5	P/P	55 - 122
2322917	Metribuzin	85.6	95.2	P/P	38 - 187
2322917	Mevinphos	95.1	89.0	P/P	54 - 134
2322917	Molinate	67.2	72.8	P/P	41 - 97.0

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P413158

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322917	Myclobutanil	104	92.3	P/P	56 - 125
2322917	Naled	106	106	P/P	10 - 108
2322917	Napropamide	88.8	76.7	P/P	50 - 150
2322917	Norflurazon	87.7	85.0	P/P	32 - 122
2322917	Octinoxate	78.4	79.2	P/P	25 - 150
2322917	Oxadiazon	81.6	76.2	P/P	40 - 119
2322917	Oxybenzone	83.6	86.2	P/P	59 - 147
2322917	Oxyfluorfen	146	136	P/P	61 - 153
2322917	Parathion Ethyl	79.3	82.3	P/P	59 - 130
2322917	Parathion Methyl	115	120	P/P	65 - 155
2322917	Pendimethalin	96.3	95.0	P/P	49 - 138
2322917	Phenytoin	54.2	51.8	P/P	50 - 200
2322917	Phorate	91.6	85.9	P/P	54 - 161
2322917	Prodiamine	75.2	65.7	P/P	33 - 161
2322917	Prometon	62.9	72.8	P/P	48 - 140
2322917	Prometryn	87.7	87.0	P/P	55 - 134
2322917	Pronamide	120	109	P/P	66 - 137
2322917	Propanil	106	94.3	P/P	50 - 150
2322917	Propargite	69.8	57.5	P/P	50 - 200
2322917	Propiconazole	86.3	83.6	P/P	36 - 150
2322917	Pyraflufen Ethyl	89.2	91.6	P/P	50 - 150
2322917	Pyridaben	78.5	80.8	P/P	50 - 200
2322917	Pyriproxyfen	82.7	75.0	P/P	10 - 165
2322917	Simazine	78.9	83.9	P/P	57 - 145
2322917	Stirophos	69.7	56.5	P/P	50 - 150
2322917	Sulfentrazone	99.1	93.3	P/P	34 - 140
2322917	Tebuconazole	63.3	50.3	P/P	10 - 127
2322917	Terbufos	120	119	P/P	59 - 138
2322917	Terbuthylazine	86.4	82.1	P/P	68 - 119
2322917	Thiobencarb	78.0	79.2	P/P	50 - 150
2322917	Triadimefon	104	106	P/P	50 - 150

Reference Method: EPA 8321B

Batch ID: P413045

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322881	Acesulfame K	117	129	P/P	40 - 150
2322881	AMPA	71.5	74.4	P/P	40 - 150
2322881	Endothall	80.5	85.0	P/P	40 - 150
2322881	Glufosinate	72.7	74.7	P/P	40 - 150
2322881	Glyphosate	71.1	76.3	P/P	40 - 150
2322881	Sucralose	112	128	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P413103

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322881	2,4-D	77.2	75.5	P/P	40 - 150
2322881	2,4,5-T	88.4	85.1	P/P	40 - 150
2322881	Acetaminophen	113	111	P/P	30 - 150
2322881	Acetamiprid	11.0	24.6	F/F	40 - 150
2322881	Afidopyropen	30.2	42.7	F/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P413103

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322881	Bentazon	53.2	47.8	P/P	30 - 150
2322881	Benzovindiflupyr	41.9	42.0	P/P	40 - 150
2322881	Carbamazepine	44.2	43.5	P/P	40 - 150
2322881	Clothianidin	49.2	49.7	P/P	40 - 150
2322881	Dinotefuran	86.4	85.4	P/P	40 - 150
2322881	Diuron	34.8	35.3	F/F	40 - 150
2322881	Fenuron	40.4	40.5	P/P	40 - 150
2322881	Fluridone	46.0	44.3	P/P	40 - 150
2322881	Hydrocodone	52.2	53.5	P/P	40 - 150
2322881	Ibuprofen	61.9	49.2	P/P	40 - 150
2322881	Imidacloprid	38.1	39.0	F/F	40 - 150
2322881	Linuron	41.5	41.1	P/P	40 - 150
2322881	Mandestrobin	58.0	59.2	P/P	40 - 150
2322881	MCPP	115	112	P/P	40 - 150
2322881	Naproxen	45.4	50.4	P/P	40 - 150
2322881	Primidone	59.5	59.1	P/P	40 - 150
2322881	Pyraclostrobin	56.0	54.7	P/P	40 - 150
2322881	Thiamethoxam	34.4	35.3	F/F	40 - 150
2322881	Tolfenpyrad	40.6	36.9	P/P	30 - 150
2322881	Triclopyr	94.8	89.2	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P413567

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2323243	Fluoride	100	99.2	P/P	92 - 107

Reference Method: SM 5310 B-2011

Batch ID: P413568

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2323232	Organic Carbon	96.4	95.3	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P413074

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322944	Color (true)	3.50	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P413079

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322931	Turbidity	0.927	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P413179

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322975	Calcium	2.11	Spike	P	0 - 20
2322975	Iron	3.17	Spike	P	0 - 20
2322975	Magnesium	2.95	Spike	P	0 - 20
2322975	Potassium	3.13	Spike	P	0 - 20
2322975	Sodium	2.08	Spike	P	0 - 20
2322975	Strontium	1.66	Spike	P	0 - 20
2322975	Tin	2.50	Spike	P	0 - 20
2322975	Titanium	2.26	Spike	P	0 - 20
2322975	Vanadium	2.43	Spike	P	0 - 20
2322975	Zinc	1.60	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P413179

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322975	Aluminum	0.335	Spike	P	0 - 20
2322975	Antimony	0.120	Spike	P	0 - 20
2322975	Arsenic	0.845	Spike	P	0 - 20
2322975	Barium	1.06	Spike	P	0 - 20
2322975	Beryllium	0.224	Spike	P	0 - 20
2322975	Boron	0.962	Spike	P	0 - 20
2322975	Cadmium	0.434	Spike	P	0 - 20
2322975	Chromium	0.781	Spike	P	0 - 20
2322975	Cobalt	1.38	Spike	P	0 - 20
2322975	Copper	0.863	Spike	P	0 - 20
2322975	Lead	0.763	Spike	P	0 - 20
2322975	Manganese	0.317	Spike	P	0 - 20
2322975	Molybdenum	0.500	Spike	P	0 - 20
2322975	Nickel	0.198	Spike	P	0 - 20
2322975	Selenium	1.61	Spike	P	0 - 20
2322975	Silver	1.42	Spike	P	0 - 20
2322975	Thallium	0.723	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413492

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322944	Chloride	0.760	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413495

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322944	Sulfate	1.03	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413434

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322947	Ammonia-N	2.36	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413480

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322832	Kjeldahl Nitrogen	1.75	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413401

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322945	NO2NO3-N	0.482	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413407

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2323002	Total-P	0.538	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P413077

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2323003	O-Phosphate-P	0.0623	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P413158

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322917	Acetochlor	11.5	Spike	P	0 - 27
2322917	Alachlor	7.77	Spike	P	0 - 27

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P413158

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322917	Ametryn	0.0780	Spike	P	0 - 34
2322917	Atrazine	0.258	Spike	P	0 - 41
2322917	Atrazine Desethyl	32.4	Spike	P	0 - 38
2322917	Avobenzone	2.85	Spike	P	0 - 30
2322917	Azinphos Methyl	10.7	Spike	P	0 - 62
2322917	Azoxystrobin	0.935	Spike	P	0 - 32
2322917	Bromacil	17.4	Spike	P	0 - 30
2322917	Butylate	24.0	Spike	P	0 - 59
2322917	Caffeine	46.2	Spike	P	0 - 60
2322917	Carbophenothion	10.6	Spike	P	0 - 25
2322917	Carfentrazone Ethyl	12.6	Spike	P	0 - 26
2322917	Chlorfenapyr	12.7	Spike	P	0 - 30
2322917	Chlorpyrifos Ethyl	8.98	Spike	P	0 - 27
2322917	Chlorpyrifos Methyl	2.83	Spike	P	0 - 26
2322917	Coumaphos	17.2	Spike	P	0 - 30
2322917	Cyanazine	0.705	Spike	P	0 - 58
2322917	Cyprodinil	9.25	Spike	P	0 - 30
2322917	Demeton	11.1	Spike	P	0 - 25
2322917	Diazinon	6.66	Spike	P	0 - 29
2322917	Difenoconazole	11.8	Spike	P	0 - 25
2322917	Dimethenamid	12.8	Spike	P	0 - 30
2322917	Dimethomorph	13.0	Spike	P	0 - 30
2322917	Disulfoton	9.67	Spike	P	0 - 33
2322917	Dithiopyr	8.75	Spike	P	0 - 22
2322917	EPTC	12.5	Spike	P	0 - 38
2322917	Ethion	29.9	Spike	P	0 - 79
2322917	Ethoprop	1.88	Spike	P	0 - 23
2322917	Etridiazole	5.76	Spike	P	0 - 30
2322917	Fenamiphos	19.1	Spike	P	0 - 58
2322917	Fenbuconazole	4.72	Spike	P	0 - 37
2322917	Fipronil	9.52	Spike	P	0 - 33
2322917	Fipronil Desulfinyl	7.43	Spike	P	0 - 26
2322917	Fipronil Sulfide	5.81	Spike	P	0 - 37
2322917	Fipronil Sulfone	13.0	Spike	P	0 - 50
2322917	Fluazifop-P-butyl	7.21	Spike	P	0 - 24
2322917	Fludioxonil	4.20	Spike	P	0 - 26
2322917	Flumioxazin	11.8	Spike	P	0 - 37
2322917	Flutolanil	1.83	Spike	P	0 - 26
2322917	Fluxapyroxad	8.31	Spike	P	0 - 34
2322917	Fonofos	8.56	Spike	P	0 - 27
2322917	Hexazinone	10.0	Spike	P	0 - 36
2322917	Imazalil	0.905	Spike	P	0 - 65
2322917	Iprodione	5.04	Spike	P	0 - 33
2322917	Loratadine	4.67	Spike	P	0 - 30
2322917	Malathion	2.10	Spike	P	0 - 44
2322917	Metalaxyl	1.27	Spike	P	0 - 38
2322917	Metolachlor	4.06	Spike	P	0 - 36
2322917	Metribuzin	10.6	Spike	P	0 - 63
2322917	Mevinphos	6.61	Spike	P	0 - 26
2322917	Molinate	8.06	Spike	P	0 - 40
2322917	Myclobutanil	11.5	Spike	P	0 - 21

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P413158

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322917	Naled	0.494	Spike	P	0 - 26
2322917	Napropamide	14.6	Spike	P	0 - 30
2322917	Norflurazon	3.11	Spike	P	0 - 24
2322917	Octinoxate	1.06	Spike	P	0 - 30
2322917	Oxadiazon	6.90	Spike	P	0 - 27
2322917	Oxybenzone	3.15	Spike	P	0 - 30
2322917	Oxyfluorfen	6.77	Spike	P	0 - 24
2322917	Parathion Ethyl	3.72	Spike	P	0 - 28
2322917	Parathion Methyl	4.75	Spike	P	0 - 27
2322917	Pendimethalin	1.43	Spike	P	0 - 31
2322917	Phenytoin	4.38	Spike	P	0 - 30
2322917	Phorate	6.50	Spike	P	0 - 27
2322917	Prodiamine	13.5	Spike	P	0 - 52
2322917	Prometon	14.5	Spike	P	0 - 31
2322917	Prometryn	0.769	Spike	P	0 - 28
2322917	Pronamide	9.67	Spike	P	0 - 26
2322917	Propanil	12.1	Spike	P	0 - 30
2322917	Propargite	19.3	Spike	P	0 - 30
2322917	Propiconazole	3.23	Spike	P	0 - 31
2322917	Pyraflufen Ethyl	2.60	Spike	P	0 - 30
2322917	Pyridaben	2.87	Spike	P	0 - 30
2322917	Pyriproxyfen	9.80	Spike	P	0 - 50
2322917	Simazine	6.12	Spike	P	0 - 29
2322917	Stiropfos	21.0	Spike	P	0 - 30
2322917	Sulfentrazone	5.95	Spike	P	0 - 33
2322917	Tebuconazole	22.9	Spike	P	0 - 44
2322917	Terbufos	0.615	Spike	P	0 - 29
2322917	Terbuthylazine	4.99	Spike	P	0 - 27
2322917	Thiobencarb	1.51	Spike	P	0 - 30
2322917	Triadimefon	2.56	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P413045

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322881	Acesulfame K	10.3	Spike	P	0 - 30
2322881	AMPA	3.74	Spike	P	0 - 30
2322881	Endothall	5.48	Spike	P	0 - 30
2322881	Glufosinate	2.63	Spike	P	0 - 30
2322881	Glyphosate	5.97	Spike	P	0 - 30
2322881	Sucralose	12.9	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P413103

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322881	2,4-D	1.89	Spike	P	0 - 30
2322881	2,4,5-T	3.79	Spike	P	0 - 30
2322881	Acetaminophen	1.77	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B

Batch ID: P413103

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322881	Acetamiprid	74.9	Spike	F	0 - 30
2322881	Afidopyropen	50.5	Spike	F	0 - 30
2322881	Bentazon	4.23	Spike	P	0 - 30
2322881	Benzovindiflupyr	0.317	Spike	P	0 - 30
2322881	Carbamazepine	0.942	Spike	P	0 - 30
2322881	Clothianidin	1.70	Spike	P	0 - 30
2322881	Dinotefuran	1.17	Spike	P	0 - 30
2322881	Diuron	2.50	Spike	P	0 - 30
2322881	Fenuron	1.59	Spike	P	0 - 30
2322881	Fluridone	2.06	Spike	P	0 - 30
2322881	Hydrocodone	0.752	Spike	P	0 - 30
2322881	Ibuprofen	22.7	Spike	P	0 - 30
2322881	Imazapyr	2.32	Spike	P	0 - 30
2322881	Imidacloprid	2.88	Spike	P	0 - 30
2322881	Linuron	0.542	Spike	P	0 - 30
2322881	Mandestrobin	1.82	Spike	P	0 - 30
2322881	MCPP	2.27	Spike	P	0 - 30
2322881	Naproxen	10.5	Spike	P	0 - 30
2322881	Primidone	0.547	Spike	P	0 - 30
2322881	Pyraclostrobin	2.27	Spike	P	0 - 30
2322881	Thiamethoxam	1.06	Spike	P	0 - 30
2322881	Tolfenpyrad	9.63	Spike	P	0 - 30
2322881	Triclopyr	6.04	Spike	P	0 - 30

Reference Method: SM 2320 B-2011

Batch ID: P413565

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2323243	Total Alkalinity	1.45	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011

Batch ID: P413671

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2323001	TDS	2.33	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011

Batch ID: P413567

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2323243	Fluoride	0.480	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011

Batch ID: P413568

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2323232	Organic Carbon	0.725	Spike	P	0 - 20

Quality Assurance Report Precision

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

Quality Assurance Report Surrogates

Lab Sample ID: 2323007
Field Sample ID: G1NE0934

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	79.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	107	P	30 - 160
EPA 8321B	Carbamazepine-d10	35.1	P	30 - 160
EPA 8321B	Diuron-d6	67.8	P	30 - 160
EPA 8321B	Endothall-d6	87.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	76.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	53.0	P	30 - 160
EPA 8321B	Primidone-d5	63.5	P	30 - 160
EPA 8321B	Sucralose-d6	127	P	30 - 160

Lab Sample ID: 2323009
Field Sample ID: G1NE0934

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	44.3	P	20 - 200
EPA 8270E	Simazine-d10	95.9	P	71 - 140
EPA 8270E	Terbufos-d10	97.7	P	62 - 131
EPA 8270E	Terphenyl-d14	121	P	50 - 124

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A111778

Included Lab Sample IDs: 2323001

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A111779

Included Lab Sample IDs: 2323003

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.8	101	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A111781

Included Lab Sample IDs: 2323001

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	99.5	P/P	95 - 105

Reference Method: EPA 8321B

Run ID: A111859

Included Lab Sample IDs: 2323007

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	158	158	P/P	60 - 160
Sucralose	121	121	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A111874

Included Lab Sample IDs: 2323007

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	96.3	95.2	P/P	60 - 160
Endothall	90.1	86.7	P/P	60 - 160
Glufosinate	86.9	87.2	P/P	60 - 160
Glyphosate	94.5	88.3	P/P	60 - 160

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A111895

Included Lab Sample IDs: 2323008

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	96.6	96.4	P/P	90 - 110
Antimony	99.9	99.7	P/P	90 - 110
Arsenic	94.7	95.5	P/P	90 - 110
Barium	96.4	97.5	P/P	90 - 110
Beryllium	94.3	93.4	P/P	90 - 110
Boron	98.1	97.2	P/P	90 - 110
Cadmium	98.1	97.5	P/P	90 - 110
Chromium	96.7	96.5	P/P	90 - 110
Cobalt	92.3	92.0	P/P	90 - 110
Copper	92.9	93.2	P/P	90 - 110
Lead	94.8	95.3	P/P	90 - 110
Manganese	96.3	95.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A111895

Included Lab Sample IDs: 2323008

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Molybdenum	95.1	95.6	P/P	90 - 110
Nickel	93.1	93.3	P/P	90 - 110
Selenium	95.1	96.8	P/P	90 - 110
Silver	96.2	96.3	P/P	90 - 110
Thallium	95.2	95.2	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A111908

Included Lab Sample IDs: 2323008

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	103	P/P	90 - 110
Iron	103	103	P/P	90 - 110
Magnesium	102	104	P/P	90 - 110
Potassium	102	102	P/P	90 - 110
Sodium	101	100	P/P	90 - 110
Strontium	99.8	98.1	P/P	90 - 110
Tin	98.6	100	P/P	90 - 110
Titanium	99.1	102	P/P	90 - 110
Vanadium	98.6	102	P/P	90 - 110
Zinc	101	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A111932

Included Lab Sample IDs: 2323007

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	76.3	81.2	P/P	50 - 150
2,4,5-T	87.4	84.1	P/P	50 - 150
Acetaminophen	97.9	99.3	P/P	60 - 160
Acetamiprid	95.3	95.6	P/P	50 - 150
Afidopyropen	71.6	78.3	P/P	50 - 150
Bentazon	100	105	P/P	50 - 160
Benzovindiflupyr	94.2	95.9	P/P	50 - 150
Carbamazepine	96.0	94.5	P/P	60 - 150
Clothianidin	104	103	P/P	60 - 150
Dinotefuran	105	101	P/P	50 - 150
Diuron	99.2	102	P/P	60 - 160
Fenuron	104	106	P/P	60 - 150
Fluridone	92.8	97.7	P/P	60 - 160
Hydrocodone	93.8	97.1	P/P	60 - 150
Ibuprofen	90.6	74.2	P/P	50 - 160
Imazapyr	78.3	83.8	P/P	50 - 150
Imidacloprid	102	105	P/P	60 - 150
Linuron	101	103	P/P	60 - 150
Mandestrobin	88.6	94.0	P/P	50 - 150
MCPP	89.6	91.7	P/P	50 - 150
Naproxen	95.1	77.8	P/P	50 - 160
Primidone	91.0	97.6	P/P	60 - 150
Pyraclostrobin	85.4	91.3	P/P	60 - 150
Thiamethoxam	104	102	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A111932
Included Lab Sample IDs: 2323007

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Tolfenpyrad	76.1	84.0	P/P	60 - 150
Triclopyr	83.1	80.2	P/P	50 - 150

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A111933
Included Lab Sample IDs: 2323002

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A111943
Included Lab Sample IDs: 2323002

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	96.9	96.4	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A111962
Included Lab Sample IDs: 2323001

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	97.9	98.5	P/P	90 - 110
Sulfate	99.2	100	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A111986
Included Lab Sample IDs: 2323002

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.0	98.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A111987
Included Lab Sample IDs: 2323002

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

Reference Method: SM 2320 B-2011
Run ID: A111988
Included Lab Sample IDs: 2323001

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	93.8	95.0	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A111988
Included Lab Sample IDs: 2323001

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

Reference Method: SM 4500-F- C-2011

Run ID: A111988

Included Lab Sample IDs: 2323001

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

Reference Method: EPA 8270E

Run ID: A112034

Included Lab Sample IDs: 2323009

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Avobenzone	99.5		P	80 - 120
Octinoxate	90.4		P	80 - 120
Oxybenzone	101		P	80 - 120

Reference Method: EPA 8270E

Run ID: A112072

Included Lab Sample IDs: 2323009

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	111		P	80 - 120
Alachlor	113		P	80 - 120
Ametryn	105		P	80 - 120
Atrazine	118		P	80 - 120
Atrazine Desethyl	104		P	80 - 120
Azinphos Methyl	110		P	80 - 120
Azoxystrobin	96.8		P	80 - 120
Bromacil	106		P	80 - 120
Butylate	115		P	80 - 120
Caffeine	93.2		P	80 - 120
Carbophenothion	102		P	80 - 120
Carfentrazone Ethyl	110		P	80 - 120
Chlorfenapyr	109		P	80 - 120
Chlorpyrifos Ethyl	99.8		P	80 - 120
Chlorpyrifos Methyl	101		P	80 - 120
Coumaphos	101		P	80 - 120
Cyanazine	114		P	80 - 120
Cyprodinil	113		P	80 - 120
Demeton	104		P	80 - 120
Diazinon	118		P	80 - 120
Difenoconazole	109		P	80 - 120
Dimethenamid	107		P	80 - 120
Dimethomorph	93.4		P	80 - 120
Disulfoton	107		P	80 - 120
Dithiopyr	108		P	80 - 120
EPTC	94.3		P	80 - 120
Ethion	105		P	80 - 120
Ethoprop	101		P	80 - 120
Etridiazole	112		P	80 - 120
Fenamiphos	110		P	80 - 120
Fenbuconazole	110		P	80 - 120
Fipronil	120		P	80 - 120
Fipronil Desulfinyl	105		P	80 - 120
Fipronil Sulfide	104		P	80 - 120
Fipronil Sulfone	99.5		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A112072
Included Lab Sample IDs: 2323009

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluazifop-P-butyl	105		P	80 - 120
Fludioxonil	120		P	80 - 120
Flumioxazin	85.2		P	80 - 120
Flutolanil	115		P	80 - 120
Fluxapyroxad	104		P	80 - 120
Fonofos	111		P	80 - 120
Hexazinone	102		P	80 - 120
Imazalil	118		P	80 - 120
Iprodione	113		P	80 - 120
Loratadine	82.6		P	80 - 120
Malathion	103		P	80 - 120
Metalaxyl	105		P	80 - 120
Metolachlor	117		P	80 - 120
Metribuzin	98.9		P	80 - 120
Mevinphos	111		P	80 - 120
Molinate	93.3		P	80 - 120
Myclobutanil	109		P	80 - 120
Naled	98.9		P	80 - 120
Napropamide	113		P	80 - 120
Norflurazon	115		P	80 - 120
Oxadiazon	116		P	80 - 120
Oxyfluorfen	118		P	80 - 120
Parathion Ethyl	94.7		P	80 - 120
Parathion Methyl	101		P	80 - 120
Pendimethalin	117		P	80 - 120
Phenytoin	114		P	80 - 120
Phorate	99.3		P	80 - 120
Prodiamine	119		P	80 - 120
Prometon	103		P	80 - 120
Prometryn	103		P	80 - 120
Pronamide	112		P	80 - 120
Propanil	106		P	80 - 120
Propargite	117		P	80 - 120
Propiconazole	120		P	80 - 120
Pyraflufen Ethyl	118		P	80 - 120
Pyridaben	103		P	80 - 120
Pyriproxyfen	104		P	80 - 120
Simazine	104		P	80 - 120
Stirophos	94.5		P	80 - 120
Sulfentrazone	108		P	80 - 120
Tebuconazole	112		P	80 - 120
Terbufos	109		P	80 - 120
Terbuthylazine	120		P	80 - 120
Thiobencarb	112		P	80 - 120
Triadimefon	119		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A112104
Included Lab Sample IDs: 2323002

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

Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A112104

Included Lab Sample IDs: 2323002

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.4	97.9	P/P	90 - 110

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
DEP SOP: NU-094-1	Color (true)	100					3.50	
EPA 180.1 Rev. 2.0	Turbidity	95.8					0.927	
EPA 200.7 Rev. 4.4	Calcium	107	104	110	107			2.11
	Iron	108	105	111	106			3.17
	Magnesium	109	107	113	109			2.95
	Potassium	101	97.9	103	99.9			3.13
	Sodium	112	95.1	104	101			2.08
	Strontium	113	99.0	101	99.4			1.66
	Tin	98.3	98.4	102	99.8			2.50
	Titanium	97.0	101	105	103			2.26
	Vanadium	91.1	94.4	98.3	96.0			2.43
	Zinc	105	101	103	101			1.60
EPA 200.8 Rev. 5.4	Aluminum	99.5	99.0	99.4	99.3			0.335
	Antimony	102	100	101	101			0.120
	Arsenic	99.7	96.7	97.6	96.0			0.845
	Barium	105	102	103	101			1.06
	Beryllium	98.1	93.9	93.7	92.8			0.224
	Boron	101	100	101	102			0.962
	Cadmium	98.8	98.3	98.7	99.8			0.434
	Chromium	97.7	97.1	97.9	96.4			0.781
	Cobalt	98.5	93.8	95.1	93.1			1.38
	Copper	97.7	93.2	94.1	93.3			0.863
	Lead	99.3	98.3	99.0	98.7			0.763
	Manganese	98.4	98.6	99.1	97.6			0.317
	Molybdenum	99.5	97.9	98.4	97.5			0.500
	Nickel	99.1	95.1	95.3	94.4			0.198
	Selenium	97.7	93.5	95.0	94.1			1.61
	Silver	97.2	95.0	96.3	94.8			1.42
	Thallium	103	101	102	101			0.723
EPA 300.0 Rev. 2.1	Chloride	98.9	97.6	97.4			0.760	
	Sulfate	99.2	98.5	95.8			1.03	
EPA 350.1 Rev. 2.0	Ammonia-N	101	103	106				2.36
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.1	91.6	88.7				1.75
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5	98.6	99.1				0.482
EPA 365.1 Rev. 2.0	Total-P	103	101	100				0.538
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.2	98.1	98.2				0.0623
EPA 8270E	Acetochlor	107	98.8	88.0				11.5
	Alachlor	97.1	110	102				7.77
	Ametryn	79.1	91.3	91.3				0.0780
	Atrazine	113	116	116				0.258
	Atrazine Desethyl	77.6	108	77.5				32.4
	Avobenzone	108	114	111				2.85
	Azinphos Methyl	104	114	103				10.7
	Azoxystrobin	104	100	101				0.935
	Bromacil	77.1	73.5	87.6				17.4
	Butylate	39.4	35.6	45.3				24.0
	Caffeine	88.2	12.9	20.6				46.2
	Carbophenothion	112	105	94.5				10.6
	Carfentrazone Ethyl	109	112	98.9				12.6
	Chlorfenapyr	103	97.5	85.9				12.7
	Chlorpyrifos Ethyl	103	94.6	86.5				8.98
	Chlorpyrifos Methyl	109	115	111				2.83
	Coumaphos	97.8	79.2	94.2				17.2
	Cyanazine	97.7	97.8	98.5				0.705

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Cyprodinil	122	114	104			9.25
	Demeton	92.8	96.3	86.2			11.1
	Diazinon	119	117	125			6.66
	Difenoconazole	147	152	135			11.8
	Dimethenamid	89.5	97.2	85.4			12.8
	Dimethomorph	97.3	97.5	111			13.0
	Disulfoton	111	111	101			9.67
	Dithiopyr	97.3	105	96.4			8.75
	EPTC	43.9	59.8	67.8			12.5
	Ethion	82.8	86.9	64.3			29.9
	Ethoprop	103	95.6	97.4			1.88
	Etridiazole	53.3	65.3	69.2			5.76
	Fenamiphos	109	65.4	79.1			19.1
	Fenbuconazole	86.7	89.3	93.6			4.72
	Fipronil	116	120	109			9.52
	Fipronil Desulfinyl	110	127	118			7.43
	Fipronil Sulfide	107	97.7	92.2			5.81
	Fipronil Sulfone	104	113	98.9			13.0
	Fluazifop-P-butyl	123	111	103			7.21
	Fludioxonil	103	105	100			4.20
	Flumioxazin	136	169	151			11.8
	Flutolanil	78.8	79.9	78.4			1.83
	Fluxapyroxad	88.5	90.7	83.5			8.31
	Fonofos	102	99.4	108			8.56
	Hexazinone	94.7	99.9	90.4			10.0
	Imazalil	133	84.9	84.1			0.905
	Iprodione	98.5	100	106			5.04
	Loratadine	84.5	85.7	90.0			4.67
	Malathion	96.9	87.4	89.3			2.10
	Metalaxyl	95.1	100	98.7			1.27
	Metolachlor	86.1	93.2	89.5			4.06
	Metribuzin	89.0	85.6	95.2			10.6
	Mevinphos	92.3	95.1	89.0			6.61
	Molinate	75.2	67.2	72.8			8.06
	Myclobutanil	93.0	104	92.3			11.5
	Naled	95.7	106	106			0.494
	Napropamide	78.2	88.8	76.7			14.6
	Norflurazon	87.6	87.7	85.0			3.11
	Octinoxate	70.4	78.4	79.2			1.06
	Oxadiazon	81.7	81.6	76.2			6.90
	Oxybenzone	77.6	83.6	86.2			3.15
	Oxyfluorfen	128	146	136			6.77
	Parathion Ethyl	96.8	79.3	82.3			3.72
	Parathion Methyl	124	115	120			4.75
	Pendimethalin	92.9	96.3	95.0			1.43
	Phenytol	39.1	54.2	51.8			4.38
	Phorate	102	91.6	85.9			6.50
	Prodiamine	49.5	75.2	65.7			13.5
	Prometon	90.9	62.9	72.8			14.5
	Prometryn	82.1	87.7	87.0			0.769
	Pronamide	105	120	109			9.67
	Propanil	90.9	106	94.3			12.1
	Propargite	62.1	69.8	57.5			19.3
	Propiconazole	92.0	86.3	83.6			3.23

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8270E	Pyraflufen Ethyl	98.5	89.2	91.6			2.60
	Pyridaben	89.3	78.5	80.8			2.87
	Pyriproxyfen	85.2	82.7	75.0			9.80
	Simazine	82.4	78.9	83.9			6.12
	Stirophos	66.6	69.7	56.5			21.0
	Sulfentrazone	66.0	99.1	93.3			5.95
	Tebuconazole	54.4	63.3	50.3			22.9
	Terbufos	111	120	119			0.615
	Terbutylazine	87.0	86.4	82.1			4.99
	Thiobencarb	74.4	78.0	79.2			1.51
	Triadimefon	102	104	106			2.56
	2,4-D	83.8	77.2	75.5			1.89
EPA 8321B	2,4,5-T	83.8	88.4	85.1			3.79
	Acesulfame K	155	117	129			10.3
	Acetaminophen	92.3	113	111			1.77
	Acetamiprid	66.2	11.0	24.6			74.9
	Afidopyropen	45.5	30.2	42.7			50.5
	AMPA	91.6	71.5	74.4			3.74
	Bentazon	77.6	53.2	47.8			4.23
	Benzovindiflupyr	68.9	41.9	42.0			0.317
	Carbamazepine	65.1	44.2	43.5			0.942
	Clothianidin	94.1	49.2	49.7			1.70
	Dinotefuran	108	86.4	85.4			1.17
	Diuron	73.7	34.8	35.3			2.50
	Endothall	85.3	80.5	85.0			5.48
	Fenuron	96.4	40.4	40.5			1.59
	Fluridone	77.5	46.0	44.3			2.06
	Glufosinate	91.1	72.7	74.7			2.63
	Glyphosate	91.6	71.1	76.3			5.97
	Hydrocodone	93.5	52.2	53.5			0.752
	Ibuprofen	71.5	61.9	49.2			22.7
	Imazapyr	80.1					2.32
	Imidacloprid	77.4	38.1	39.0			2.88
	Linuron	71.1	41.5	41.1			0.542
	Mandestrobin	71.1	58.0	59.2			1.82
	MCPP	94.9	115	112			2.27
	Naproxen	62.4	45.4	50.4			10.5
	Primidone	97.4	59.5	59.1			0.547
	Pyraclostrobin	60.6	56.0	54.7			2.27
	Sucralose	117	112	128			12.9
	Thiamethoxam	84.9	34.4	35.3			1.06
	Tolfenpyrad	34.5	40.6	36.9			9.63
	Triclopyr	102	94.8	89.2			6.04
SM 2320 B-2011	Total Alkalinity	98.3				1.45	
SM 2540 C-2011	TDS					2.33	
SM 4500-F- C-2011	Fluoride	98.7	100	99.2			0.480
SM 5310 B-2011	Organic Carbon	99.8	96.4	95.3			0.725

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2323001
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2323001

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2323008
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2323008
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2323001
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2323001
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2323002
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2323002
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2323002
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2323002
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2323003
EPA 8270E	Analysis of Sunscreen Compounds in Water by GC/MS-SIM	2323009
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2323009
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2323007
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2323001
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2323008
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2323001
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2323001
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2323001
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2323002

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	04/28/2022			04/28/2022 14:56	Blanca Fach	2323001
EPA 180.1 Rev. 2.0	04/28/2022			04/28/2022 14:25	Khloe J Berg	2323001
EPA 200.7 Rev. 4.4	04/28/2022	05/02/2022 10:10	Megan Whitefoot	05/03/2022 22:56	McKinley C Carter	2323008
EPA 200.8 Rev. 5.4	04/28/2022	05/02/2022 10:10	Megan Whitefoot	05/03/2022 17:57	Alexander Thompson	2323008
EPA 300.0 Rev. 2.1	04/28/2022			05/05/2022 15:18	Anna M. Plaviak	2323001
EPA 350.1 Rev. 2.0	04/28/2022			05/05/2022 15:26	Judith K. Clark	2323002
EPA 351.2 Rev. 2.0	04/28/2022	05/11/2022 13:28	Alexandra J Mattheus	05/12/2022 14:26	Alexandra J Mattheus	2323002
EPA 353.2 Rev. 2.0	04/28/2022			05/05/2022 10:10	Beverly Y. Sanders	2323002
EPA 365.1 Rev. 2.0	04/28/2022	05/05/2022 14:45	Simonne.V. Calhoun	05/06/2022 17:08	Sarah A Nixon	2323002
EPA 365.1 Rev. 2.0 dissolved	04/28/2022			04/28/2022 15:41	Nathaniel J Jones	2323003
EPA 8270E	04/28/2022	05/03/2022 08:00	Fe-Val Siddell	05/06/2022 01:37	Lipi Saha	2323009
	04/28/2022	05/03/2022 08:00	Fe-Val Siddell	05/06/2022 19:32	Vandana T. Nagar	2323009
EPA 8321B	04/28/2022	04/29/2022 11:00	Hoor Shaik	05/04/2022 16:03	Juyoung Kim	2323007
	04/28/2022	04/29/2022 11:00	Hoor Shaik	05/06/2022 04:45	Juyoung Kim	2323007
	04/28/2022	04/29/2022 17:00	Manjita Shrestha	04/29/2022 23:59	Manjita Shrestha	2323007
	04/28/2022	04/29/2022 17:00	Manjita Shrestha	04/30/2022 21:12	Manjita Shrestha	2323007
SM 2320 B-2011	04/28/2022			05/05/2022 00:08	Dale L. Simmons	2323001
SM 2340 B-2011	04/28/2022			05/03/2022 22:56	McKinley C Carter	2323008
SM 2540 C-2011	04/28/2022			04/29/2022 13:01	Ping Hua	2323001
SM 2540 D-2011	04/28/2022			04/29/2022 13:01	Ping Hua	2323001
SM 4500-F- C-2011	04/28/2022			05/05/2022 00:08	Dale L. Simmons	2323001
SM 5310 B-2011	04/28/2022			05/06/2022 18:44	Judith K. Clark	2323002