Chemical Analysis Report

TLH-ROC-2022-11-07-01

Florida DEP Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **Cherry Lake (Nutrients, Ecoli, Pesticides, PCR**
Request ID: **RQ-2022-10-10-61**
Customer: **TLH-ROC**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
Tallahassee, FL 32399
Attn: Chris Green

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Colin Wright, Program Administrator

Date Certified: 30-NOV-2022 11:42

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: 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: Middle of Cherry Lake **Collection Date/Time: 11/07/2022 12:10**

Field ID: G1TLHR0048 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2368030	DEP SOP: NU-094-1	Color (true)	5.2	I	PCU	P422086	
	EPA 180.1 Rev. 2.0	Turbidity	2.0	A	NTU	P422091	
	EPA 300.0 Rev. 2.1	Chloride	6.8		mg Cl/L	P422648	
		Sulfate	0.62		mg SO4/L	P422651	
	SM 2320 B-2011	Total Alkalinity	8.5		mg CaCO3/L	P422255	
	SM 2540 C-2015	TDS	28		mg/L	P422521	
	SM 2540 D-2015	TSS	2	I	mg/L	P422339	
	SM 4500-F- C-2011	Fluoride	0.051	I	mg F/L	P422379	RPD
2368031	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P422586	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.70		mg N/L	P422365	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P422149	
	EPA 365.1 Rev. 2.0	Total-P	0.031		mg P/L	P422195	
	SM 5310 B-2011	Organic Carbon	6.2		mg C/L	P422616	
2368035	EPA 8321B	Aldicarb	0.020	U	ug/L	P421979	
		Aldicarb Sulfone	0.0020	U	ug/L	P421979	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P421979	
		Carbaryl	0.0020	U	ug/L	P421979	
		Carbofuran	0.0020	U	ug/L	P421979	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P421979	
		Methiocarb	0.0020	U	ug/L	P421979	
		Methomyl	0.0020	U	ug/L	P421979	
		Oxamyl	0.0020	U	ug/L	P421979	
		Propoxur	0.0020	U	ug/L	P421979	
2368036		2,4-D	0.080		ug/L	P422148	
		Acesulfame K	0.10	U	ug/L	P421996	
		2,4,5-T	0.0040	U	ug/L	P422148	
		AMPA	0.10	U	ug/L	P421996	
		Acetaminophen	0.0080	U	ug/L	P422148	
		Acetamiprid	0.0020	U	ug/L	P422148	
		Endothall	0.25	U	ug/L	P421996	
		Glufosinate	0.10	U	ug/L	P421996	
		Glyphosate	0.10	U	ug/L	P421996	
		Afidopyropen	0.0020	U	ug/L	P422148	
		Bentazon	8.0E-04	U	ug/L	P422148	
		Sucralose	0.064		ug/L	P421996	
		Benzovindiflupyr	0.0020	U	ug/L	P422148	
		Carbamazepine	8.0E-04	U	ug/L	P422148	
		Clothianidin	0.0020	U	ug/L	P422148	
		Dinotefuran	0.0020	U	ug/L	P422148	
		Diuron	0.070		ug/L	P422148	
		Fenuron	0.032	U	ug/L	P422148	
		Fluridone	8.0E-04	U	ug/L	P422148	
		Imazapyr	0.0040	U	ug/L	P422148	
		Hydrocodone	0.0020	U	ug/L	P422148	

Field ID: G1TLHR0048 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2368036	EPA 8321B	Ibuprofen	0.20	U	ug/L	P422148	
		Imidacloprid	0.0020	UJ	ug/L	P422148	MS
		Linuron	0.0040	U	ug/L	P422148	
		Mandestrobin	0.0020	U	ug/L	P422148	
		MCPP	0.0040	U	ug/L	P422148	
		Naproxen	0.0080	U	ug/L	P422148	
		Primidone	0.0040	U	ug/L	P422148	
		Pyraclostrobin	0.0020	U	ug/L	P422148	
		Silvex	0.0040	U	ug/L	P422148	
		Thiamethoxam	0.0020	UJ	ug/L	P422148	MS
		Tolfenpyrad	0.0020	U	ug/L	P422148	
		Triclopyr	0.0040	U	ug/L	P422148	
2368038	EPA 8270E	Oxybenzone**	9.8	U	ng/L	P422125	
		Acetochlor	0.24	U	ng/L	P422125	
		Octinoxate**	25	I	ng/L	P422125	
		Alachlor	0.24	U	ng/L	P422125	
		Avobenzone**	98	U	ng/L	P422125	
		Ametryn	0.59	U	ng/L	P422125	
		Atrazine	21		ng/L	P422125	
		PBDE-47**	3.9	U	ng/L	P422125	
		Atrazine Desethyl	7.8		ng/L	P422125	
		PBDE-99**	4.9	U	ng/L	P422125	
		Azinphos Methyl	2.0	U	ng/L	P422125	
		Tri-o-cresyl Phosphate**	5.9	U	ng/L	P422125	
		Azoxystrobin	0.49	U	ng/L	P422125	
		Bromacil	0.49	U	ng/L	P422125	
		2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)**	12	U	ng/L	P422125	
		Butylate	0.39	U	ng/L	P422125	
		Dechlorane Plus**	29	U	ng/L	P422125	
		Caffeine**	8.4	I	ng/L	P422125	
		Carbophenothion	0.20	U	ng/L	P422125	
		Carfentrazone Ethyl	0.098	U	ng/L	P422125	
		Chlorfenapyr	0.17	U	ng/L	P422125	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P422125	RPD
		Chlorpyrifos Methyl	0.049	U	ng/L	P422125	
		Coumaphos	0.49	U	ng/L	P422125	
		Cyanazine	3.2	U	ng/L	P422125	
		Cyprodinil	0.098	U	ng/L	P422125	
		Demeton	1.5	U	ng/L	P422125	
		Diazinon	0.12	U	ng/L	P422125	
		Difenoconazole	0.59	U	ng/L	P422125	
		Dimethenamid	0.098	U	ng/L	P422125	
		Dimethomorph	0.17	U	ng/L	P422125	
		Disulfoton	0.49	U	ng/L	P422125	

Field ID: G1TLHR0048 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2368038	EPA 8270E	Dithiopyr	0.61	U	ng/L	P422125	
		EPTC	1.2	U	ng/L	P422125	
		Ethion	0.15	U	ng/L	P422125	
		Ethoprop	0.098	U	ng/L	P422125	
		Etridiazole	0.15	U	ng/L	P422125	
		Fenamiphos	0.49	U	ng/L	P422125	
		Fenbuconazole	0.12	U	ng/L	P422125	
		Fipronil	0.24	U	ng/L	P422125	MS
		Fipronil Desulfinyl**	0.12	U	ng/L	P422125	
		Fipronil Sulfide	0.15	U	ng/L	P422125	
		Fipronil Sulfone	0.15	U	ng/L	P422125	
		Fluazifop-P-butyl	0.098	U	ng/L	P422125	
		Fludioxonil	0.12	U	ng/L	P422125	
		Flumioxazin	4.4	U	ng/L	P422125	
		Flutolanil	0.34	I	ng/L	P422125	
		Fluxapyroxad	0.098	U	ng/L	P422125	
		Fonofos	0.20	U	ng/L	P422125	
		Hexazinone	0.49	U	ng/L	P422125	
		Imazalil	0.73	U	ng/L	P422125	
		Iprodione	0.59	UJ	ng/L	P422125	LCS, MS
		Loratadine**	0.34	U	ng/L	P422125	
		Malathion	0.34	U	ng/L	P422125	
		Metalaxyl	0.73	U	ng/L	P422125	
		Metolachlor	1.0	I	ng/L	P422125	
		Metribuzin	1.5	U	ng/L	P422125	
		Mevinphos	1.0	U	ng/L	P422125	
		Molinate	0.29	U	ng/L	P422125	
		Myclobutanil	0.24	U	ng/L	P422125	
		Naled	1.5	U	ng/L	P422125	
		Napropamide	0.39	U	ng/L	P422125	
		Norflurazon	0.52	I	ng/L	P422125	
		Oxadiazon	0.29	U	ng/L	P422125	
		Oxyfluorfen	0.15	U	ng/L	P422125	
		Parathion Ethyl	0.24	U	ng/L	P422125	
		Parathion Methyl	0.54	U	ng/L	P422125	
		Pendimethalin	0.98	U	ng/L	P422125	
		Phenytoin**	3.4	U	ng/L	P422125	MS
		Phorate	0.51	U	ng/L	P422125	
		Prodiamine	0.17	U	ng/L	P422125	
		Prometon	0.88	U	ng/L	P422125	
		Prometryn	0.20	UJ	ng/L	P422125	LCS, MS
		Pronamide	0.15	U	ng/L	P422125	
		Propanil	0.12	U	ng/L	P422125	
		Propargite	1.5	U	ng/L	P422125	
		Propiconazole	0.62	I	ng/L	P422125	

Field ID: G1TLHR0048 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2368038	EPA 8270E	Pyraflufen Ethyl	0.24	U	ng/L	P422125	
		Pyridaben	6.4		ng/L	P422125	
		Pyriproxyfen	0.12	U	ng/L	P422125	
		Simazine	0.49	U	ng/L	P422125	
		Stirophos	0.12	U	ng/L	P422125	
		Sulfentrazone	0.49	U	ng/L	P422125	
		Tebuconazole	4.0		ng/L	P422125	
		Terbufos	0.098	U	ng/L	P422125	
		Terbuthylazine	0.42	U	ng/L	P422125	
		Thiobencarb	0.59	U	ng/L	P422125	
		Triadimefon	0.24	U	ng/L	P422125	

Ref. Method and Comment:
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample. Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8270E: MS accuracy for atrazine and norflurazon not assessed due to high content of these parameters in the sample spiked. Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report
Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P422086

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P422091

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422648

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422651

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P422586

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422365

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P422149

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422195

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

Reference Method: EPA 8270E
Batch ID: P422125

Component	Result	Code	Units
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	12	U	ng/L
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	12	U	ng/L
Acetochlor	0.25	U	ng/L
Acetochlor	0.25	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P422125

Component	Result	Code	Units
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
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
Dechlorane Plus	30	U	ng/L
Dechlorane Plus	30	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	0.62	U	ng/L
Dithiopyr	0.62	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P422125

Component	Result	Code	Units
EPTC	1.2	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Ethoprop	0.10	U	ng/L
Etridiazole	0.15	U	ng/L
Etridiazole	0.15	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fludioxonil	0.12	U	ng/L
Fludioxonil	0.12	U	ng/L
Flumioxazin	4.5	U	ng/L
Flumioxazin	4.5	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	0.35	U	ng/L
Loratadine	0.35	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	1.5	U	ng/L
Metribuzin	1.5	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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P422125

Component	Result	Code	Units
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
Parathion Ethyl	0.25	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Parathion Methyl	0.55	U	ng/L
PBDE-47	4.0	U	ng/L
PBDE-47	4.0	U	ng/L
PBDE-99	5.0	U	ng/L
PBDE-99	5.0	U	ng/L
Pendimethalin	1.0	U	ng/L
Pendimethalin	1.0	U	ng/L
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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P422125

Component	Result	Code	Units
Stirophos	0.12	U	ng/L
Stirophos	0.12	U	ng/L
Sulfentrazone	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L
Terbuthylazine	0.42	U	ng/L
Thiobencarb	0.60	U	ng/L
Thiobencarb	0.60	U	ng/L
Tri-o-cresyl Phosphate	6.0	U	ng/L
Tri-o-cresyl Phosphate	6.0	U	ng/L
Triadimefon	0.25	U	ng/L
Triadimefon	0.25	U	ng/L

Reference Method: EPA 8321B
Batch ID: P421979

Component	Result	Code	Units
3-Hydroxycarbofuran	0.0020	U	ug/L
Aldicarb	0.020	U	ug/L
Aldicarb Sulfone	0.0020	U	ug/L
Aldicarb Sulfoxide	0.0020	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	0.0020	U	ug/L
Methiocarb	0.0020	U	ug/L
Methomyl	0.0020	U	ug/L
Oxamyl	0.0020	U	ug/L
Propoxur	0.0020	U	ug/L

Reference Method: EPA 8321B
Batch ID: P421996

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

Reference Method: EPA 8321B
Batch ID: P422148

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P422148

Component	Result	Code	Units
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	0.20	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: SM 2320 B-2011
Batch ID: P422255

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

Reference Method: SM 2540 C-2015
Batch ID: P422521

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P422339

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P422379

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P422616

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: P422086

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P422091

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422648

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	95.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422651

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P422586

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422365

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P422149

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	109		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422195

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

Reference Method: EPA 8270E
Batch ID: P422125

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	82.1		P	42 - 162
Acetochlor	107		P	69 - 123
Alachlor	85.3		P	65 - 118
Ametryn	107		P	58 - 141

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P422125

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Atrazine	103		P	73 - 118
Atrazine Desethyl	77.9		P	32 - 125
Avobenzone	90.1		P	40 - 203
Azinphos Methyl	155		P	36 - 197
Azoxystrobin	109		P	58 - 226
Bromacil	119		P	48 - 120
Butylate	62.5		P	27 - 85.0
Caffeine	78.2		P	40 - 137
Carbophenothion	110		P	54 - 132
Carfentrazone Ethyl	114		P	60 - 142
Chlorfenapyr	107		P	53 - 117
Chlorpyrifos Ethyl	92.9		P	59 - 116
Chlorpyrifos Methyl	104		P	66 - 119
Coumaphos	103		P	11 - 234
Cyanazine	204		P	61 - 248
Cyprodinil	123		P	50 - 147
Dechlorane Plus	80.2		P	47 - 182
Demeton	92.7		P	30 - 138
Diazinon	94.6		P	67 - 126
Difenoconazole	93.1		P	38 - 205
Dimethenamid	81.1		P	57 - 111
Dimethomorph	106		P	16 - 212
Disulfoton	104		P	46 - 126
Dithiopyr	100		P	62 - 115
EPTC	60.1		P	28 - 80.0
Ethion	75.7		P	24 - 122
Ethoprop	108		P	62 - 113
Etridiazole	85.3		P	28 - 92.0
Fenamiphos	111		P	57 - 128
Fenbuconazole	84.8		P	52 - 155
Fipronil	94.1		P	63 - 130
Fipronil Desulfinyl	97.7		P	61 - 130
Fipronil Sulfide	84.2		P	56 - 117
Fipronil Sulfone	87.8		P	52 - 118
Fluazifop-P-butyl	106		P	61 - 128
Fludioxonil	100		P	59 - 129
Flumioxazin	95.4		P	30 - 250
Flutolanil	100		P	53 - 127
Fluxapyroxad	108		P	42 - 132
Fonofos	90.9		P	61 - 110
Hexazinone	106		P	46 - 139
Imazalil	83.6		P	40 - 139
Iprodione	243		F	40 - 146
Loratadine	87.2		P	10 - 224
Malathion	111		P	61 - 135
Metalaxyl	92.9		P	58 - 121
Metolachlor	114		P	64 - 118
Metribuzin	98.8		P	45 - 245
Mevinphos	88.5		P	49 - 118
Molinate	80.0		P	42 - 92.0
Myclobutanil	112		P	55 - 127
Naled	76.6		P	10 - 114

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P422125

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Napropamide	94.1		P	39 - 121
Norflurazon	103		P	55 - 129
Octinoxate	85.2		P	26 - 166
Oxadiazon	97.8		P	54 - 115
Oxybenzone	60.9		P	49 - 135
Oxyfluorfen	118		P	64 - 139
Parathion Ethyl	107		P	70 - 111
Parathion Methyl	129		P	76 - 136
PBDE-47	73.0		P	41 - 148
PBDE-99	71.1		P	38 - 147
Pendimethalin	104		P	52 - 118
Phenytoin	145		P	10 - 162
Phorate	66.9		P	40 - 122
Prodiamine	87.0		P	26 - 141
Prometon	100		P	54 - 122
Prometryn	134		F	61 - 128
Pronamide	119		P	72 - 121
Propanil	96.5		P	45 - 144
Propargite	143		P	10 - 199
Propiconazole	105		P	56 - 127
Pyraflufen Ethyl	97.8		P	56 - 140
Pyridaben	137		P	26 - 211
Pyriproxyfen	161		P	33 - 194
Simazine	107		P	67 - 121
Stirophos	117		P	20 - 142
Sulfentrazone	83.9		P	21 - 144
Tebuconazole	110		P	10 - 122
Terbufos	118		P	60 - 129
Terbuthylazine	105		P	69 - 113
Thiobencarb	111		P	51 - 120
Tri-o-cresyl Phosphate	62.9		P	49 - 150
Triadimefon	96.9		P	56 - 114

Reference Method: EPA 8321B
Batch ID: P421979

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	80.3		P	40 - 150
Aldicarb	93.1		P	30 - 150
Aldicarb Sulfone	94.5		P	40 - 150
Aldicarb Sulfoxide	117		P	40 - 150
Carbaryl	80.8		P	40 - 150
Carbofuran	88.8		P	40 - 150
Methiocarb	75.9		P	40 - 150
Methomyl	101		P	40 - 150
Oxamyl	94.5		P	40 - 150
Propoxur	79.0		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P421996

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P421996

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	125		P	40 - 150
AMPA	91.5		P	40 - 150
Endothall	115		P	40 - 150
Glufosinate	79.5		P	40 - 150
Glyphosate	92.9		P	40 - 150
Sucralose	98.9		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P422148

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	104		P	40 - 150
2,4,5-T	89.5		P	40 - 150
Acetaminophen	96.6		P	30 - 150
Acetamiprid	88.3		P	40 - 150
Afidopyropen	37.4		P	30 - 150
Bentazon	97.7		P	30 - 150
Benzovindiflupyr	89.3		P	40 - 150
Carbamazepine	97.1		P	40 - 150
Clothianidin	98.8		P	40 - 150
Dinotefuran	104		P	40 - 150
Diuron	81.6		P	40 - 150
Fenuron	110		P	40 - 150
Fluridone	102		P	40 - 150
Hydrocodone	105		P	40 - 150
Ibuprofen	94.7		P	40 - 150
Imazapyr	95.8		P	40 - 150
Imidacloprid	103		P	40 - 150
Linuron	82.3		P	40 - 150
Mandestrobin	105		P	40 - 150
MCPP	105		P	40 - 150
Naproxen	86.3		P	40 - 150
Primidone	95.2		P	40 - 150
Pyraclostrobin	86.5		P	40 - 150
Silvex	79.6		P	40 - 150
Thiamethoxam	104		P	40 - 150
Tolfenpyrad	50.5		P	30 - 150
Triclopyr	90.2		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P422255

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.9		P	94 - 106

Reference Method: SM 2540 C-2015
Batch ID: P422521

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 2540 D-2015
Batch ID: P422339

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	98.1		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P422379

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	103		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P422616

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	101		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422648

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367774	Chloride	92.7		P	90 - 110
2367995	Chloride	95.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422651

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367774	Sulfate	93.8		P	90 - 110
2367995	Sulfate	97.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P422586

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367679	Ammonia-N	99.8	96.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422365

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2368791	Kjeldahl Nitrogen	107	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P422149

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2368031	NO2NO3-N	108	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422195

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2368043	Total-P	105	103	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P422125

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367538	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	111	107	P/P	26 - 165
2367538	Acetochlor	99.6	91.5	P/P	67 - 124
2367538	Alachlor	86.7	74.5	P/P	60 - 120
2367538	Ametryn	112	101	P/P	54 - 216
2367538	Atrazine Desethyl	75.8	65.2	P/P	15 - 122
2367538	Avobenzone	121	117	P/P	37 - 178
2367538	Azinphos Methyl	145	140	P/P	40 - 292
2367538	Azoxystrobin	130	129	P/P	35 - 220
2367538	Bromacil	125	125	P/P	45 - 127
2367538	Butylate	52.8	42.0	P/P	20 - 83.0
2367538	Caffeine	85.9	87.9	P/P	10 - 194
2367538	Carbophenothion	123	116	P/P	57 - 127
2367538	Carfentrazone Ethyl	128	117	P/P	51 - 141
2367538	Chlorfenapyr	101	106	P/P	46 - 111

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P422125

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367538	Chlorpyrifos Ethyl	82.2	115	P/P	52 - 120
2367538	Chlorpyrifos Methyl	102	102	P/P	63 - 119
2367538	Coumaphos	110	97.6	P/P	10 - 228
2367538	Cyanazine	212	220	P/P	59 - 241
2367538	Cyprodinil	125	111	P/P	47 - 146
2367538	Dechlorane Plus	114	98.5	P/P	50 - 150
2367538	Demeton	131	115	P/P	40 - 136
2367538	Diazinon	88.8	85.6	P/P	69 - 132
2367538	Difenoconazole	103	89.9	P/P	57 - 258
2367538	Dimethenamid	79.4	74.3	P/P	54 - 110
2367538	Dimethomorph	135	115	P/P	28 - 210
2367538	Disulfoton	104	91.2	P/P	43 - 133
2367538	Dithiopyr	115	96.3	P/P	39 - 116
2367538	EPTC	55.2	40.6	P/P	20 - 78.0
2367538	Ethion	71.7	68.6	P/P	17 - 119
2367538	Ethoprop	117	115	P/P	66 - 120
2367538	Etridiazole	83.0	75.0	P/P	28 - 96.0
2367538	Fenamiphos	113	96.1	P/P	41 - 126
2367538	Fenbuconazole	114	85.0	P/P	42 - 169
2367538	Fipronil	139	126	F/P	61 - 132
2367538	Fipronil Desulfinyl	101	102	P/P	56 - 132
2367538	Fipronil Sulfide	96.9	90.4	P/P	48 - 119
2367538	Fipronil Sulfone	128	119	P/P	42 - 131
2367538	Fluazifop-P-butyl	105	110	P/P	53 - 131
2367538	Fludioxonil	111	93.9	P/P	56 - 127
2367538	Flumioxazin	89.5	90.7	P/P	19 - 300
2367538	Flutolanil	106	98.0	P/P	41 - 127
2367538	Fluxapyroxad	115	97.6	P/P	42 - 172
2367538	Fonofos	90.4	76.2	P/P	59 - 113
2367538	Hexazinone	113	103	P/P	66 - 122
2367538	Imazalil	102	98.3	P/P	21 - 283
2367538	Iprodione	266	248	F/F	43 - 150
2367538	Loratadine	92.1	85.3	P/P	23 - 201
2367538	Malathion	102	101	P/P	58 - 136
2367538	Metalaxyl	89.2	91.0	P/P	55 - 120
2367538	Metolachlor	119	119	P/P	57 - 121
2367538	Metribuzin	117	117	P/P	58 - 294
2367538	Mevinphos	99.5	87.3	P/P	50 - 126
2367538	Molinate	80.9	74.8	P/P	42 - 93.0
2367538	Myclobutanil	122	102	P/P	55 - 125
2367538	Naled	110	81.1	P/P	18 - 200
2367538	Napropamide	98.4	89.7	P/P	39 - 110
2367538	Octinoxate	112	103	P/P	21 - 159
2367538	Oxadiazon	94.2	87.0	P/P	43 - 112
2367538	Oxybenzone	91.9	78.6	P/P	41 - 142
2367538	Oxyfluorfen	121	122	P/P	64 - 153
2367538	Parathion Ethyl	107	104	P/P	69 - 114
2367538	Parathion Methyl	134	125	P/P	79 - 139
2367538	PBDE-47	97.7	94.4	P/P	27 - 144
2367538	PBDE-99	95.0	91.3	P/P	18 - 150
2367538	Pendimethalin	119	99.6	P/P	50 - 139
2367538	Phenytoin	116	157	P/F	10 - 146

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P422125

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367538	Phorate	89.8	73.9	P/P	54 - 161
2367538	Prodiamine	75.5	78.3	P/P	30 - 161
2367538	Prometon	118	100	P/P	45 - 134
2367538	Prometryn	143	149	F/F	45 - 137
2367538	Pronamide	119	123	P/P	65 - 133
2367538	Propanil	91.5	96.8	P/P	49 - 142
2367538	Propargite	149	144	P/P	10 - 203
2367538	Propiconazole	112	93.8	P/P	38 - 146
2367538	Pyraflufen Ethyl	103	95.1	P/P	34 - 153
2367538	Pyridaben	167	144	P/P	12 - 192
2367538	Pyriproxyfen	139	164	P/P	33 - 180
2367538	Simazine	109	115	P/P	51 - 157
2367538	Stirophos	113	126	P/P	10 - 128
2367538	Sulfentrazone	98.6	87.3	P/P	53 - 186
2367538	Tebuconazole	122	114	P/P	10 - 133
2367538	Terbufos	126	114	P/P	65 - 139
2367538	Terbuthylazine	103	99.3	P/P	66 - 117
2367538	Thiobencarb	108	117	P/P	51 - 119
2367538	Tri-o-cresyl Phosphate	90.6	82.4	P/P	31 - 144
2367538	Triadimefon	91.3	113	P/P	48 - 119

Reference Method: EPA 8321B
Batch ID: P421979

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2368035	3-Hydroxycarbofuran	76.2	78.5	P/P	40 - 150
2368035	Aldicarb	87.5	81.7	P/P	30 - 150
2368035	Aldicarb Sulfone	102	102	P/P	40 - 150
2368035	Aldicarb Sulfoxide	124	128	P/P	40 - 150
2368035	Carbaryl	90.9	93.1	P/P	40 - 150
2368035	Carbofuran	96.6	98.2	P/P	40 - 150
2368035	Methiocarb	80.0	84.0	P/P	40 - 150
2368035	Methomyl	105	103	P/P	40 - 150
2368035	Oxamyl	95.5	97.8	P/P	40 - 150
2368035	Propoxur	86.9	84.9	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P421996

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367490	Acesulfame K	140	144	P/P	40 - 150
2367490	AMPA	88.8	84.1	P/P	40 - 150
2367490	Endothall	120	120	P/P	40 - 150
2367490	Glufosinate	73.9	79.4	P/P	40 - 150
2367490	Glyphosate	81.2	88.1	P/P	40 - 150
2367490	Sucralose	97.5	97.7	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P422148

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2368036	2,4,5-T	80.6	79.5	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P422148

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2368036	Acetaminophen	110	115	P/P	30 - 150
2368036	Acetamiprid	97.8	93.4	P/P	40 - 150
2368036	Afidopyropen	41.9	39.2	P/P	30 - 150
2368036	Bentazon	88.1	90.8	P/P	30 - 150
2368036	Benzovindiflupyr	92.0	96.1	P/P	40 - 150
2368036	Carbamazepine	97.7	99.8	P/P	40 - 150
2368036	Clothianidin	125	125	P/P	40 - 150
2368036	Dinotefuran	133	137	P/P	40 - 150
2368036	Diuron	79.6	80.9	P/P	40 - 150
2368036	Fenuron	99.8	105	P/P	40 - 150
2368036	Fluridone	99.8	103	P/P	40 - 150
2368036	Hydrocodone	123	131	P/P	40 - 150
2368036	Ibuprofen	97.2	92.1	P/P	40 - 150
2368036	Imazapyr	108	113	P/P	40 - 150
2368036	Imidacloprid	164	174	F/F	40 - 150
2368036	Linuron	81.1	80.7	P/P	40 - 150
2368036	Mandestrobin	107	109	P/P	40 - 150
2368036	MCPP	104	109	P/P	40 - 150
2368036	Naproxen	76.9	84.6	P/P	40 - 150
2368036	Primidone	118	117	P/P	40 - 150
2368036	Pyraclostrobin	96.5	98.6	P/P	40 - 150
2368036	Silvex	90.6	93.7	P/P	40 - 150
2368036	Thiamethoxam	158	165	F/F	40 - 150
2368036	Tolfenpyrad	55.3	56.0	P/P	30 - 150
2368036	Triclopyr	86.5	84.8	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P422379

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367310	Fluoride	102	98.4	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P422616

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2368512	Organic Carbon	97.0	97.7	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P422086

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368040	Color (true)	2.25	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P422091

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368030	Turbidity	3.53	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422648

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367774	Chloride	0.383	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422651

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367774	Sulfate	0.654	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P422586

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367679	Ammonia-N	1.81	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422365

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368791	Kjeldahl Nitrogen	5.90	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P422149

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368031	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422195

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368043	Total-P	1.70	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P422125

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367538	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	3.91	Spike	P	0 - 37
2367538	Acetochlor	8.44	Spike	P	0 - 28
2367538	Alachlor	15.2	Spike	P	0 - 30
2367538	Ametryn	6.92	Spike	P	0 - 32
2367538	Atrazine	5.42	Spike	P	0 - 41
2367538	Atrazine Desethyl	11.8	Spike	P	0 - 36
2367538	Avobenzone	3.40	Spike	P	0 - 36
2367538	Azinphos Methyl	3.09	Spike	P	0 - 75
2367538	Azoxystrobin	1.00	Spike	P	0 - 39
2367538	Bromacil	0.0178	Spike	P	0 - 33
2367538	Butylate	22.8	Spike	P	0 - 44
2367538	Caffeine	2.26	Spike	P	0 - 74
2367538	Carbophenothion	5.46	Spike	P	0 - 25
2367538	Carfentrazone Ethyl	8.98	Spike	P	0 - 27
2367538	Chlorfenapyr	5.15	Spike	P	0 - 24
2367538	Chlorpyrifos Ethyl	32.9	Spike	F	0 - 26
2367538	Chlorpyrifos Methyl	0.775	Spike	P	0 - 26
2367538	Coumaphos	11.7	Spike	P	0 - 28
2367538	Cyanazine	3.90	Spike	P	0 - 48
2367538	Cyprodinil	11.5	Spike	P	0 - 29
2367538	Dechlorane Plus	15.0	Spike	P	0 - 30
2367538	Demeton	13.3	Spike	P	0 - 33
2367538	Diazinon	3.63	Spike	P	0 - 29
2367538	Difenoconazole	14.0	Spike	P	0 - 34
2367538	Dimethenamid	6.58	Spike	P	0 - 39
2367538	Dimethomorph	16.2	Spike	P	0 - 51
2367538	Disulfoton	13.1	Spike	P	0 - 30
2367538	Dithiopyr	18.1	Spike	P	0 - 26
2367538	EPTC	30.6	Spike	P	0 - 43
2367538	Ethion	4.42	Spike	P	0 - 79
2367538	Ethoprop	2.20	Spike	P	0 - 29
2367538	Etridiazole	10.1	Spike	P	0 - 33
2367538	Fenamiphos	16.3	Spike	P	0 - 40
2367538	Fenbuconazole	29.3	Spike	P	0 - 74
2367538	Fipronil	10.1	Spike	P	0 - 29
2367538	Fipronil Desulfinyl	0.389	Spike	P	0 - 32
2367538	Fipronil Sulfide	6.88	Spike	P	0 - 30
2367538	Fipronil Sulfone	6.87	Spike	P	0 - 33
2367538	Fluazifop-P-butyl	4.81	Spike	P	0 - 38
2367538	Fludioxonil	16.5	Spike	P	0 - 29
2367538	Flumioxazin	1.35	Spike	P	0 - 51
2367538	Flutolanil	8.07	Spike	P	0 - 25
2367538	Fluxapyroxad	14.5	Spike	P	0 - 45
2367538	Fonofos	17.0	Spike	P	0 - 27
2367538	Hexazinone	5.13	Spike	P	0 - 30
2367538	Imazalil	3.96	Spike	P	0 - 100
2367538	Iprodione	6.84	Spike	P	0 - 33
2367538	Loratadine	7.73	Spike	P	0 - 56
2367538	Malathion	0.579	Spike	P	0 - 37
2367538	Metalaxyl	1.90	Spike	P	0 - 40
2367538	Metolachlor	0.366	Spike	P	0 - 29

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P422125

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367538	Metribuzin	0.520	Spike	P	0 - 45
2367538	Mevinphos	13.1	Spike	P	0 - 29
2367538	Molinate	7.87	Spike	P	0 - 33
2367538	Myclobutanil	16.8	Spike	P	0 - 26
2367538	Naled	30.5	Spike	P	0 - 37
2367538	Napropamide	9.24	Spike	P	0 - 44
2367538	Norflurazon	13.8	Spike	P	0 - 30
2367538	Octinoxate	9.07	Spike	P	0 - 45
2367538	Oxadiazon	6.28	Spike	P	0 - 28
2367538	Oxybenzone	15.6	Spike	P	0 - 46
2367538	Oxyfluorfen	0.736	Spike	P	0 - 28
2367538	Parathion Ethyl	3.15	Spike	P	0 - 31
2367538	Parathion Methyl	6.46	Spike	P	0 - 29
2367538	PBDE-47	3.46	Spike	P	0 - 36
2367538	PBDE-99	3.98	Spike	P	0 - 40
2367538	Pendimethalin	17.3	Spike	P	0 - 33
2367538	Phenytoin	30.3	Spike	P	0 - 100
2367538	Phorate	19.4	Spike	P	0 - 36
2367538	Prodiamine	3.65	Spike	P	0 - 71
2367538	Prometon	16.6	Spike	P	0 - 36
2367538	Prometryn	3.69	Spike	P	0 - 28
2367538	Pronamide	3.15	Spike	P	0 - 24
2367538	Propanil	5.67	Spike	P	0 - 28
2367538	Propargite	3.79	Spike	P	0 - 43
2367538	Propiconazole	13.5	Spike	P	0 - 33
2367538	Pyraflufen Ethyl	8.23	Spike	P	0 - 29
2367538	Pyridaben	14.9	Spike	P	0 - 30
2367538	Pyriproxyfen	16.5	Spike	P	0 - 79
2367538	Simazine	4.61	Spike	P	0 - 29
2367538	Stirophos	10.7	Spike	P	0 - 61
2367538	Sulfentrazone	10.3	Spike	P	0 - 33
2367538	Tebuconazole	6.71	Spike	P	0 - 69
2367538	Terbufos	10.1	Spike	P	0 - 29
2367538	Terbuthylazine	3.51	Spike	P	0 - 32
2367538	Thiobencarb	8.03	Spike	P	0 - 26
2367538	Tri-o-cresyl Phosphate	9.43	Spike	P	0 - 33
2367538	Triadimefon	21.7	Spike	P	0 - 28

Reference Method: EPA 8321B
Batch ID: P421979

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368035	3-Hydroxycarbofuran	3.04	Spike	P	0 - 30
2368035	Aldicarb	6.94	Spike	P	0 - 30
2368035	Aldicarb Sulfone	0.220	Spike	P	0 - 30
2368035	Aldicarb Sulfoxide	2.97	Spike	P	0 - 30
2368035	Carbaryl	2.39	Spike	P	0 - 30
2368035	Carbofuran	1.66	Spike	P	0 - 30
2368035	Methiocarb	4.93	Spike	P	0 - 30
2368035	Methomyl	1.32	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P421979

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368035	Oxamyl	2.35	Spike	P	0 - 30
2368035	Propoxur	2.32	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P421996

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367490	Acesulfame K	3.00	Spike	P	0 - 30
2367490	AMPA	5.35	Spike	P	0 - 30
2367490	Endothall	0.484	Spike	P	0 - 30
2367490	Glufosinate	7.21	Spike	P	0 - 30
2367490	Glyphosate	8.22	Spike	P	0 - 30
2367490	Sucralose	0.190	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P422148

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368036	2,4-D	3.46	Spike	P	0 - 30
2368036	2,4,5-T	1.43	Spike	P	0 - 30
2368036	Acetaminophen	4.72	Spike	P	0 - 30
2368036	Acetamiprid	4.59	Spike	P	0 - 30
2368036	Afidopyropen	6.75	Spike	P	0 - 30
2368036	Bentazon	3.09	Spike	P	0 - 30
2368036	Benzovindiflupyr	4.35	Spike	P	0 - 30
2368036	Carbamazepine	2.12	Spike	P	0 - 30
2368036	Clothianidin	0.201	Spike	P	0 - 30
2368036	Dinotefuran	2.98	Spike	P	0 - 30
2368036	Diuron	0.799	Spike	P	0 - 30
2368036	Fenuron	4.64	Spike	P	0 - 30
2368036	Fluridone	2.96	Spike	P	0 - 30
2368036	Hydrocodone	5.87	Spike	P	0 - 30
2368036	Ibuprofen	5.38	Spike	P	0 - 30
2368036	Imazapyr	4.47	Spike	P	0 - 30
2368036	Imidacloprid	6.07	Spike	P	0 - 30
2368036	Linuron	0.461	Spike	P	0 - 30
2368036	Mandestrobin	1.35	Spike	P	0 - 30
2368036	MCPP	4.77	Spike	P	0 - 30
2368036	Naproxen	9.54	Spike	P	0 - 30
2368036	Primidone	0.482	Spike	P	0 - 30
2368036	Pyraclostrobin	2.10	Spike	P	0 - 30
2368036	Silvex	3.39	Spike	P	0 - 30
2368036	Thiamethoxam	4.23	Spike	P	0 - 30
2368036	Tolfenpyrad	1.09	Spike	P	0 - 30
2368036	Triclopyr	2.01	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: SM 2320 B-2011
Batch ID: P422255

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367578	Total Alkalinity	0.734	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015
Batch ID: P422521

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367474	TDS	6.61	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P422379

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367310	Fluoride	2.41	Spike	F	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P422616

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368512	Organic Carbon	0.637	Spike	P	0 - 20

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2368035
Field Sample ID: G1TLHR0048

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	69.2	P	30 - 160

Lab Sample ID: 2368036
Field Sample ID: G1TLHR0048

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	112	P	30 - 160
EPA 8321B	Acetaminophen-d4	102	P	30 - 160
EPA 8321B	Carbamazepine-d10	93.5	P	30 - 160
EPA 8321B	Diuron-d6	75.6	P	30 - 160
EPA 8321B	Endothall-d6	117	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	104	P	30 - 160
EPA 8321B	Ibuprofen-d3	87.5	P	30 - 160
EPA 8321B	Primidone-d5	123	P	30 - 160
EPA 8321B	Sucralose-d6	103	P	30 - 160

Lab Sample ID: 2368038
Field Sample ID: G1TLHR0048

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	115	P	20 - 200
EPA 8270E	Simazine-d10	137	P	62 - 142
EPA 8270E	Terbufos-d10	127	P	58 - 132
EPA 8270E	Terphenyl-d14	77.7	P	52 - 137

Quality Assurance Report
Calibration Verification

Reference Method: DEP SOP: NU-094-1
Run ID: A115809
Included Lab Sample IDs: 2368030

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.5	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A115811
Included Lab Sample IDs: 2368030

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A115831
Included Lab Sample IDs: 2368031

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	106	108	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A115857
Included Lab Sample IDs: 2368035

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	92.2	93.0	P/P	60 - 150
Aldicarb	95.1	96.8	P/P	60 - 150
Aldicarb Sulfone	92.5	96.3	P/P	50 - 150
Aldicarb Sulfoxide	120	121	P/P	50 - 150
Carbaryl	105	101	P/P	60 - 150
Carbofuran	101	104	P/P	50 - 150
Methiocarb	84.0	81.9	P/P	50 - 150
Methomyl	97.9	94.8	P/P	50 - 150
Oxamyl	102	102	P/P	50 - 150
Propoxur	99.0	94.7	P/P	50 - 150

Reference Method: EPA 8270E
Run ID: A115866
Included Lab Sample IDs: 2368038

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	96.3		P	80 - 120
Alachlor	92.5		P	80 - 120
Ametryn	84.9		P	80 - 120
Atrazine	101		P	80 - 120
Atrazine Desethyl	93.7		P	80 - 120
Azinphos Methyl	86.5		P	80 - 120
Azoxystrobin	99.6		P	80 - 120
Bromacil	87.9		P	80 - 120
Butylate	91.0		P	80 - 120
Caffeine	95.4		P	80 - 120
Carbophenothion	89.7		P	80 - 120
Carfentrazone Ethyl	95.3		P	80 - 120
Chlorfenapyr	90.3		P	80 - 120
Chlorpyrifos Ethyl	93.9		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A115866
Included Lab Sample IDs: 2368038

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlorpyrifos Methyl	95.8		P	80 - 120
Coumaphos	83.0		P	80 - 120
Cyanazine	92.0		P	80 - 120
Cyprodinil	80.6		P	80 - 120
Demeton	95.6		P	80 - 120
Diazinon	89.7		P	80 - 120
Difenoconazole	82.6		P	80 - 120
Dimethenamid	96.2		P	80 - 120
Dimethomorph	106		P	80 - 120
Disulfoton	103		P	80 - 120
Dithiopyr	82.2		P	80 - 120
EPTC	96.4		P	80 - 120
Ethion	85.9		P	80 - 120
Ethoprop	98.7		P	80 - 120
Etridiazole	98.1		P	80 - 120
Fenamiphos	90.6		P	80 - 120
Fenbuconazole	89.1		P	80 - 120
Fipronil	97.9		P	80 - 120
Fipronil Desulfinyl	80.6		P	80 - 120
Fipronil Sulfide	83.9		P	80 - 120
Fipronil Sulfone	93.9		P	80 - 120
Fluazifop-P-butyl	88.0		P	80 - 120
Fludioxonil	88.3		P	80 - 120
Flumioxazin	88.8		P	80 - 120
Flutolanil	92.7		P	80 - 120
Fluxapyroxad	83.8		P	80 - 120
Fonofos	90.4		P	80 - 120
Hexazinone	97.6		P	80 - 120
Imazalil	90.6		P	80 - 120
Iprodione	96.7		P	80 - 120
Loratadine	85.1		P	80 - 120
Malathion	94.6		P	80 - 120
Metalaxyl	81.6		P	80 - 120
Metolachlor	94.8		P	80 - 120
Metribuzin	95.5		P	80 - 120
Mevinphos	92.1		P	80 - 120
Molinate	103		P	80 - 120
Myclobutanil	92.8		P	80 - 120
Naled	90.2		P	80 - 120
Napropamide	87.2		P	80 - 120
Norflurazon	94.2		P	80 - 120
Oxadiazon	91.1		P	80 - 120
Oxyfluorfen	87.6		P	80 - 120
Parathion Ethyl	103		P	80 - 120
Parathion Methyl	101		P	80 - 120
Pendimethalin	103		P	80 - 120
Phenytoin	90.7		P	80 - 120
Phorate	96.2		P	80 - 120
Prodiamine	91.3		P	80 - 120
Prometon	100		P	80 - 120
Prometryn	80.8		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A115866
Included Lab Sample IDs: 2368038

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pronamide	91.1		P	80 - 120
Propanil	85.5		P	80 - 120
Propargite	82.0		P	80 - 120
Propiconazole	90.7		P	80 - 120
Pyraflufen Ethyl	92.0		P	80 - 120
Pyridaben	91.7		P	80 - 120
Pyriproxyfen	89.4		P	80 - 120
Simazine	104		P	80 - 120
Stirophos	91.5		P	80 - 120
Sulfentrazone	83.0		P	80 - 120
Tebuconazole	82.4		P	80 - 120
Terbufos	92.2		P	80 - 120
Terbuthylazine	94.3		P	80 - 120
Thiobencarb	97.6		P	80 - 120
Triadimefon	94.9		P	80 - 120

Reference Method: EPA 8321B
Run ID: A115877
Included Lab Sample IDs: 2368036

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	95.3	92.9	P/P	60 - 160
Endothall	125	113	P/P	60 - 160
Glufosinate	81.4	79.6	P/P	60 - 160
Glyphosate	89.3	91.5	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A115879
Included Lab Sample IDs: 2368036

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	133	130	P/P	60 - 160
Sucralose	101	96.4	P/P	60 - 160

Reference Method: SM 2320 B-2011
Run ID: A115885
Included Lab Sample IDs: 2368030

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.0	96.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A115901
Included Lab Sample IDs: 2368031

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A115912
Included Lab Sample IDs: 2368036

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	84.7	88.0	P/P	50 - 150
2,4,5-T	93.9	102	P/P	50 - 150
Acetaminophen	97.3	91.9	P/P	60 - 160
Acetamiprid	102	97.3	P/P	50 - 150
Afidopyropen	88.0	86.5	P/P	50 - 150
Bentazon	95.0	96.8	P/P	50 - 160
Benzovindiflupyr	90.9	92.7	P/P	50 - 150
Carbamazepine	103	100	P/P	60 - 150
Clothianidin	96.2	94.1	P/P	60 - 150
Dinotefuran	103	101	P/P	50 - 150
Diuron	94.8	95.7	P/P	60 - 160
Fenuron	86.4	91.6	P/P	60 - 150
Fluridone	94.9	88.8	P/P	60 - 160
Hydrocodone	97.6	99.6	P/P	60 - 150
Ibuprofen	110	106	P/P	50 - 160
Imazapyr	96.9	100	P/P	50 - 150
Imidacloprid	94.0	87.1	P/P	60 - 150
Linuron	89.0	81.2	P/P	60 - 150
Mandestrobin	99.8	98.6	P/P	50 - 150
MCPP	96.0	95.6	P/P	50 - 150
Naproxen	98.1	83.6	P/P	50 - 160
Primidone	98.8	91.6	P/P	60 - 150
Pyraclostrobin	89.8	89.8	P/P	60 - 150
Silvex	85.1	89.3	P/P	50 - 150
Thiamethoxam	99.2	99.9	P/P	50 - 150
Tolfenpyrad	82.6	82.5	P/P	60 - 150
Triclopyr	93.9	101	P/P	50 - 150

Reference Method: EPA 8270E
Run ID: A115918
Included Lab Sample IDs: 2368038

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	95.5		P	80 - 120
Avobenzone	92.1		P	80 - 120
Dechlorane Plus	86.3		P	80 - 120
Octinoxate	97.0		P	80 - 120
Oxybenzone	98.4		P	80 - 120
PBDE-47	92.0		P	80 - 120
PBDE-99	85.3		P	80 - 120
Tri-o-cresyl Phosphate	96.2		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A115939
Included Lab Sample IDs: 2368030

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	96.8	97.1	P/P	90 - 110
Sulfate	97.6	98.1	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: SM 4500-F- C-2011
Run ID: A115952
Included Lab Sample IDs: 2368030

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A116026
Included Lab Sample IDs: 2368031

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	105	106	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A116034
Included Lab Sample IDs: 2368031

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.9	97.6	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A116048
Included Lab Sample IDs: 2368031

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	100	97.8	P/P	90 - 110

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

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
DEP SOP: NU-094-1	Color (true)	100				2.25	
EPA 180.1 Rev. 2.0	Turbidity	101				3.53	
EPA 300.0 Rev. 2.1	Chloride	95.5	92.7	95.4		0.383	
	Sulfate	97.1	93.8	97.1		0.654	
EPA 350.1 Rev. 2.0	Ammonia-N	98.0	99.8	96.8			1.81
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.5	107	100			5.90
EPA 353.2 Rev. 2.0	NO2NO3-N	109	108	108			0.0
EPA 365.1 Rev. 2.0	Total-P	103	105	103			1.70
EPA 8270E	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	82.1	111	107			3.91
	Acetochlor	107	99.6	91.5			8.44
	Alachlor	85.3	86.7	74.5			15.2
	Ametryn	107	112	101			6.92
	Atrazine	103					5.42
	Atrazine Desethyl	77.9	75.8	65.2			11.8
	Avobenzone	90.1	121	117			3.40
	Azinphos Methyl	155	145	140			3.09
	Azoxystrobin	109	130	129			1.00
	Bromacil	119	125	125			0.0178
	Butylate	62.5	52.8	42.0			22.8
	Caffeine	78.2	85.9	87.9			2.26
	Carbophenothion	110	123	116			5.46
	Carfentrazone Ethyl	114	128	117			8.98
	Chlorfenapyr	107	101	106			5.15
	Chlorpyrifos Ethyl	92.9	82.2	115			32.9
	Chlorpyrifos Methyl	104	102	102			0.775
	Coumaphos	103	110	97.6			11.7
	Cyanazine	204	212	220			3.90
	Cyprodinil	123	125	111			11.5
	Dechlorane Plus	80.2	114	98.5			15.0
	Demeton	92.7	131	115			13.3
	Diazinon	94.6	88.8	85.6			3.63
	Difenoconazole	93.1	103	89.9			14.0
	Dimethenamid	81.1	79.4	74.3			6.58
	Dimethomorph	106	135	115			16.2
	Disulfoton	104	104	91.2			13.1
	Dithiopyr	100	115	96.3			18.1
	EPTC	60.1	55.2	40.6			30.6
	Ethion	75.7	71.7	68.6			4.42
	Ethoprop	108	117	115			2.20
	Etridiazole	85.3	83.0	75.0			10.1
	Fenamiphos	111	113	96.1			16.3
	Fenbuconazole	84.8	114	85.0			29.3
	Fipronil	94.1	139	126			10.1
	Fipronil Desulfinyl	97.7	101	102			0.389
	Fipronil Sulfide	84.2	96.9	90.4			6.88
	Fipronil Sulfone	87.8	128	119			6.87
	Fluazifop-P-butyl	106	105	110			4.81
	Fludioxonil	100	111	93.9			16.5
	Flumioxazin	95.4	89.5	90.7			1.35
	Flutolanil	100	106	98.0			8.07
	Fluxapyroxad	108	115	97.6			14.5
	Fonofos	90.9	90.4	76.2			17.0

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8270E	Hexazinone	106	113	103			5.13
	Imazalil	83.6	102	98.3			3.96
	Iprodione	243	266	248			6.84
	Loratadine	87.2	92.1	85.3			7.73
	Malathion	111	102	101			0.579
	Metalaxyl	92.9	89.2	91.0			1.90
	Metolachlor	114	119	119			0.366
	Metribuzin	98.8	117	117			0.520
	Mevinphos	88.5	99.5	87.3			13.1
	Molinate	80.0	80.9	74.8			7.87
	Myclobutanil	112	122	102			16.8
	Naled	76.6	110	81.1			30.5
	Napropamide	94.1	98.4	89.7			9.24
	Norflurazon	103					13.8
	Octinoxate	85.2	112	103			9.07
	Oxadiazon	97.8	94.2	87.0			6.28
	Oxybenzone	60.9	91.9	78.6			15.6
	Oxyfluorfen	118	121	122			0.736
	Parathion Ethyl	107	107	104			3.15
	Parathion Methyl	129	134	125			6.46
	PBDE-47	73.0	97.7	94.4			3.46
	PBDE-99	71.1	95.0	91.3			3.98
	Pendimethalin	104	119	99.6			17.3
	Phenytoin	145	116	157			30.3
	Phorate	66.9	89.8	73.9			19.4
	Prodiamine	87.0	75.5	78.3			3.65
	Prometon	100	118	100			16.6
	Prometryn	134	143	149			3.69
	Pronamide	119	119	123			3.15
	Propanil	96.5	91.5	96.8			5.67
	Propargite	143	149	144			3.79
	Propiconazole	105	112	93.8			13.5
	Pyraflufen Ethyl	97.8	103	95.1			8.23
	Pyridaben	137	167	144			14.9
	Pyriproxyfen	161	139	164			16.5
	Simazine	107	109	115			4.61
	Stirophos	117	113	126			10.7
	Sulfentrazone	83.9	98.6	87.3			10.3
	Tebuconazole	110	122	114			6.71
	Terbufos	118	126	114			10.1
	Terbuthylazine	105	103	99.3			3.51
	Thiobencarb	111	108	117			8.03
	Tri-o-cresyl Phosphate	62.9	90.6	82.4			9.43
	Triadimefon	96.9	91.3	113			21.7
EPA 8321B	2,4-D	104					3.46
	2,4,5-T	89.5	80.6	79.5			1.43
	3-Hydroxycarbofuran	80.3	76.2	78.5			3.04
	Acesulfame K	125	140	144			3.00
	Acetaminophen	96.6	110	115			4.72
	Acetamiprid	88.3	97.8	93.4			4.59
	Afidopyropen	37.4	41.9	39.2			6.75
	Aldicarb	93.1	87.5	81.7			6.94
	Aldicarb Sulfone	94.5	102	102			0.220
	Aldicarb Sulfoxide	117	124	128			2.97

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8321B	AMPA	91.5	88.8	84.1			5.35
	Bentazon	97.7	88.1	90.8			3.09
	Benzovindiflupyr	89.3	92.0	96.1			4.35
	Carbamazepine	97.1	97.7	99.8			2.12
	Carbaryl	80.8	90.9	93.1			2.39
	Carbofuran	88.8	96.6	98.2			1.66
	Clothianidin	98.8	125	125			0.201
	Dinotefuran	104	133	137			2.98
	Diuron	81.6	79.6	80.9			0.799
	Endothall	115	120	120			0.484
	Fenuron	110	99.8	105			4.64
	Fluridone	102	99.8	103			2.96
	Glufosinate	79.5	73.9	79.4			7.21
	Glyphosate	92.9	81.2	88.1			8.22
	Hydrocodone	105	123	131			5.87
	Ibuprofen	94.7	97.2	92.1			5.38
	Imazapyr	95.8	108	113			4.47
	Imidacloprid	103	164	174			6.07
	Linuron	82.3	81.1	80.7			0.461
	Mandestrobin	105	107	109			1.35
	MCPP	105	104	109			4.77
	Methiocarb	75.9	80.0	84.0			4.93
	Methomyl	101	105	103			1.32
	Naproxen	86.3	76.9	84.6			9.54
	Oxamyl	94.5	95.5	97.8			2.35
	Primidone	95.2	118	117			0.482
	Propoxur	79.0	86.9	84.9			2.32
	Pyraclostrobin	86.5	96.5	98.6			2.10
	Silvex	79.6	90.6	93.7			3.39
	Sucralose	98.9	97.5	97.7			0.190
	Thiamethoxam	104	158	165			4.23
	Tolfenpyrad	50.5	55.3	56.0			1.09
	Triclopyr	90.2	86.5	84.8			2.01
SM 2320 B-2011	Total Alkalinity	96.9				0.734	
SM 2540 C-2015	TDS	104				6.61	
SM 2540 D-2015	TSS	98.1					
SM 4500-F- C-2011	Fluoride	103	102	98.4			2.41
SM 5310 B-2011	Organic Carbon	101	97.0	97.7			0.637

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2368030
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2368030
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2368030
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2368030
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2368031
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2368031
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2368031
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2368031
EPA 8270E	Analysis of Sunscreen Compounds and Flame Retardants in Water by GC/MS-SIM	2368038
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2368038
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2368035

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2368036
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2368030
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2368030
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2368030
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2368030
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2368031

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	11/07/2022			11/08/2022 15:37	Chandler E Cox	2368030
EPA 180.1 Rev. 2.0	11/07/2022			11/08/2022 15:56	Khloe J Berg	2368030
EPA 300.0 Rev. 2.1	11/07/2022			11/18/2022 20:39	Anna M. Plaviak	2368030
EPA 350.1 Rev. 2.0	11/07/2022			11/18/2022 14:33	Judith K. Clark	2368031
EPA 351.2 Rev. 2.0	11/07/2022	11/16/2022 13:04	Alexandra J Mattheus	11/18/2022 11:02	Samantha L Bates	2368031
EPA 353.2 Rev. 2.0	11/07/2022			11/09/2022 12:11	Beverly Y. Sanders	2368031
EPA 365.1 Rev. 2.0	11/07/2022	11/10/2022 11:40	Simonne.V. Calhoun	11/14/2022 16:44	James L Waggerby	2368031
EPA 8270E	11/07/2022	11/08/2022 08:30	Rasheda Ghaffari	11/10/2022 00:58	Michael Poppell	2368038
	11/07/2022	11/08/2022 08:30	Rasheda Ghaffari	11/10/2022 17:08	Arthur Maknenko	2368038
EPA 8321B	11/07/2022	11/08/2022 09:00	June Rhew	11/09/2022 20:32	Juyoung Kim	2368035
	11/07/2022	11/09/2022 10:20	Manjita Shrestha	11/09/2022 12:01	Manjita Shrestha	2368036
	11/07/2022	11/09/2022 10:20	Manjita Shrestha	11/10/2022 03:03	Manjita Shrestha	2368036
	11/07/2022	11/10/2022 09:30	June Rhew	11/10/2022 19:31	Juyoung Kim	2368036
SM 2320 B-2011	11/07/2022			11/10/2022 06:23	Adam P Silver	2368030
SM 2540 C-2015	11/07/2022			11/09/2022 16:35	Yijie Li	2368030
SM 2540 D-2015	11/07/2022			11/09/2022 16:35	Yijie Li	2368030
SM 4500-F- C-2011	11/07/2022			11/15/2022 21:21	Adam P Silver	2368030
SM 5310 B-2011	11/07/2022			11/18/2022 19:30	Khloe J Berg	2368031