Chemical Analysis Report

NW-DIST-2022-04-22-01

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

Event Description: **Laurel Hill East**
Request ID: **RQ-2022-04-18-27**
Customer: **NW-DIST**
Project ID: **SMP**

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Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant Date Certified: 13-MAY-2022 10:09

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: Gum Creek **Collection Date/Time: 04/21/2022 13:10**

Field ID: G4NW0382 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2321548	DEP SOP: NU-094-1	Color (true)**	78		PCU	P412785	
	EPA 180.1 Rev. 2.0	Turbidity	3.4		NTU	P412786	
	EPA 300.0 Rev. 2.1	Chloride	3.9		mg Cl/L	P413251	
		Sulfate	0.68		mg SO4/L	P413253	
	SM 2320 B-2011	Total Alkalinity	1.6	I	mg CaCO3/L	P413538	
	SM 2540 C-2011	TDS	31		mg/L	P413206	
	SM 2540 D-2011	TSS	3	I	mg/L	P413356	
	SM 4500-F- C-2011	Fluoride	0.035	U	mg F/L	P413543	
2321549	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P413110	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.42		mg N/L	P413270	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.34		mg N/L	P413028	
	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P413050	
	SM 5310 B-2011	Organic Carbon	6.8		mg C/L	P413058	
2321561	EPA 8321B	Aldicarb	0.020	U	ug/L	P412784	RPD
		Aldicarb Sulfone	0.0020	U	ug/L	P412784	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P412784	
		Carbaryl	0.0020	U	ug/L	P412784	
		Carbofuran	0.0020	U	ug/L	P412784	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P412784	
		Methiocarb	0.0020	U	ug/L	P412784	
		Methomyl	0.0020	U	ug/L	P412784	
		Oxamyl	0.0020	U	ug/L	P412784	
		Propoxur	0.0020	U	ug/L	P412784	
2321562		2,4-D	0.0020	U	ug/L	P412902	
		Acesulfame K	0.10	U	ug/L	P412884	
		2,4,5-T	0.0040	U	ug/L	P412902	
		AMPA	0.10	U	ug/L	P412884	
		Acetaminophen	0.0080	U	ug/L	P412902	
		Endothall	0.25	U	ug/L	P412884	
		Acetamiprid	0.0020	U	ug/L	P412902	MS
		Glufosinate	0.10	U	ug/L	P412884	
		Glyphosate	0.10	U	ug/L	P412884	
		Afidopyropen	0.0020	U	ug/L	P412902	RPD
		Bentazon	8.0E-04	U	ug/L	P412902	
		Sucralose	0.099		ug/L	P412884	
		Benzovindiflupyr	0.0020	U	ug/L	P412902	
		Carbamazepine	8.0E-04	U	ug/L	P412902	
		Clothianidin	0.0020	U	ug/L	P412902	
		Dinotefuran	0.0020	U	ug/L	P412902	
		Diuron	0.0020	U	ug/L	P412902	MS
		Fenuron	0.032	U	ug/L	P412902	
		Fluridone	8.0E-04	U	ug/L	P412902	
		Imazapyr	0.034		ug/L	P412902	
		Hydrocodone	0.0020	U	ug/L	P412902	

Field ID: G4NW0382 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2321562	EPA 8321B	Ibuprofen	0.020	U	ug/L	P412902	
		Imidacloprid	0.0020	U	ug/L	P412902	
		Linuron	0.0040	U	ug/L	P412902	
		Mandestrobin	0.0020	U	ug/L	P412902	
		MCPP	0.0040	U	ug/L	P412902	
		Naproxen	0.0080	U	ug/L	P412902	
		Primidone	0.0040	U	ug/L	P412902	
		Pyraclostrobin	0.0020	U	ug/L	P412902	
		Silvex	0.0040	U	ug/L	P412902	
		Thiamethoxam	0.0020	U	ug/L	P412902	
		Tolfenpyrad	0.0020	U	ug/L	P412902	
		Triclopyr	0.0040	U	ug/L	P412902	
2321564	EPA 8270E	Aldrin	0.70	U	ng/L	P412694	
		Alpha-BHC	0.11	U	ng/L	P412694	
		Alpha-Chlordane	0.22	U	ng/L	P412694	
		PCB-1016	2.2	U	ng/L	P412694	
		Beta-BHC	0.11	U	ng/L	P412694	
		PCB-1221	2.2	U	ng/L	P412694	
		Beta-Cyfluthrin**	1.3	U	ng/L	P412694	
		PCB-1232	2.2	U	ng/L	P412694	
		Bifenthrin**	0.54	U	ng/L	P412694	
		PCB-1242	2.2	U	ng/L	P412694	
		PCB-1248	2.2	U	ng/L	P412694	
		Chlorothalonil	1.3	U	ng/L	P412694	
		PCB-1254	2.2	U	ng/L	P412694	
		Cis-Nonachlor**	0.22	U	ng/L	P412694	
		PCB-1260	2.2	U	ng/L	P412694	
		Cypermethrin	1.6	U	ng/L	P412694	
		Dacthal**	0.16	U	ng/L	P412694	
		DDD-p,p'	0.27	U	ng/L	P412694	
		DDE-p,p'	0.22	U	ng/L	P412694	
		DDT-p,p'	0.27	U	ng/L	P412694	
		Delta-BHC	0.43	U	ng/L	P412694	
		Deltamethrin**	1.3	U	ng/L	P412694	
		Dichlobenil**	0.27	U	ng/L	P412694	
		Dicofol	1.3	U	ng/L	P412694	
		Dieldrin	0.51	I	ng/L	P412694	
		Endosulfan I	0.43	U	ng/L	P412694	
		Endosulfan II	0.43	U	ng/L	P412694	
		Endosulfan Sulfate	0.32	U	ng/L	P412694	
		Endrin	0.43	U	ng/L	P412694	
		Endrin Aldehyde	0.81	U	ng/L	P412694	
		Endrin Ketone	0.43	U	ng/L	P412694	
		Esfenvalerate**	0.81	U	ng/L	P412694	
		Ethalfluralin**	0.16	U	ng/L	P412694	

Field ID: G4NW0382 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2321564	EPA 8270E	Fenpropathrin**	0.27	U	ng/L	P412694	
		Gamma-BHC	0.13	U	ng/L	P412694	
		Gamma-Chlordane	0.22	U	ng/L	P412694	
		Heptachlor	0.22	U	ng/L	P412694	
		Heptachlor Epoxide	0.27	U	ng/L	P412694	
		Hexachlorobenzene**	1.1	U	ng/L	P412694	RPD
		Kepone**	5.4	U	ng/L	P412694	
		Lambda-Cyhalothrin**	0.81	U	ng/L	P412694	
		Methoprene**	0.81	U	ng/L	P412694	
		Methoxychlor	0.32	U	ng/L	P412694	
		MGK-264**	0.22	U	ng/L	P412694	
		Mirex	0.75	U	ng/L	P412694	
		Oxychlordane**	0.32	U	ng/L	P412694	
		Permethrin	1.7	U	ng/L	P412694	
		Phenothrin**	0.97	U	ng/L	P412694	
		Piperonyl Butoxide**	0.16	U	ng/L	P412694	
		Prallethrin**	2.2	U	ng/L	P412694	
		Tau-Fluvalinate**	0.27	U	ng/L	P412694	
		Tetramethrin**	0.81	U	ng/L	P412694	
		Trans-Nonachlor**	0.22	U	ng/L	P412694	
		Triclosan Methyl**	0.16	U	ng/L	P412694	
		Trifluralin	0.22	U	ng/L	P412694	
	EPA 8276	Chlordane	2.7	U	ng/L	P412694	
		Toxaphene	16	U	ng/L	P412694	
2321565	EPA 8270E	Oxybenzone**	11	U	ng/L	P413007	
		Acetochlor	1.2		ng/L	P413007	
		Octinoxate**	21	U	ng/L	P413007	
		Alachlor	0.27	U	ng/L	P413007	
		Avobenzone**	110	U	ng/L	P413007	
		Ametryn	0.64	U	ng/L	P413007	
		Atrazine	1.8		ng/L	P413007	
		Atrazine Desethyl	1.6	U	ng/L	P413007	
		Azinphos Methyl	2.1	U	ng/L	P413007	
		Azoxystrobin**	0.53	U	ng/L	P413007	
		Bromacil	0.53	U	ng/L	P413007	
		Butylate	0.43	U	ng/L	P413007	
		Caffeine**	8.0	U	ng/L	P413007	
		Carbophenothion	0.21	U	ng/L	P413007	
		Carfentrazone Ethyl**	0.11	U	ng/L	P413007	
		Chlorfenapyr**	0.19	U	ng/L	P413007	
		Chlorpyrifos Ethyl	0.27	U	ng/L	P413007	
		Chlorpyrifos Methyl	0.053	U	ng/L	P413007	
		Coumaphos**	0.53	U	ng/L	P413007	
		Cyanazine	3.5	U	ng/L	P413007	
		Cyprodinil**	0.11	U	ng/L	P413007	

Field ID: G4NW0382 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2321565	EPA 8270E	Demeton	1.6	U	ng/L	P413007	
		Diazinon	0.13	U	ng/L	P413007	
		Difenoconazole**	0.64	U	ng/L	P413007	
		Dimethenamid**	0.11	U	ng/L	P413007	
		Dimethomorph**	0.19	U	ng/L	P413007	
		Disulfoton	0.53	U	ng/L	P413007	
		Dithiopyr**	0.19	U	ng/L	P413007	
		EPTC	1.3	U	ng/L	P413007	
		Ethion	0.16	U	ng/L	P413007	
		Ethoprop	0.11	U	ng/L	P413007	
		Etridiazole**	0.16	U	ng/L	P413007	
		Fenamiphos	0.53	U	ng/L	P413007	
		Fenbuconazole**	0.13	U	ng/L	P413007	
		Fipronil	0.27	U	ng/L	P413007	
		Fipronil Desulfinyl**	0.17	I	ng/L	P413007	
		Fipronil Sulfide	0.16	UJ	ng/L	P413007	LCS
		Fipronil Sulfone	0.16	U	ng/L	P413007	
		Fluazifop-P-butyl**	0.11	U	ng/L	P413007	
		Fludioxonil**	0.13	U	ng/L	P413007	
		Flumioxazin**	1.9	U	ng/L	P413007	
		Flutolanil**	0.11	U	ng/L	P413007	
		Fluxapyroxad**	0.15	I	ng/L	P413007	
		Fonofos	0.21	U	ng/L	P413007	
		Hexazinone	0.53	U	ng/L	P413007	
		Imazalil**	0.80	U	ng/L	P413007	
		Iprodione**	0.64	U	ng/L	P413007	
		Loratadine**	0.11	U	ng/L	P413007	
		Malathion	0.37	U	ng/L	P413007	
		Metalaxyl	0.80	U	ng/L	P413007	
		Metolachlor	4.7		ng/L	P413007	
		Metribuzin	2.7	U	ng/L	P413007	
		Mevinphos	1.1	U	ng/L	P413007	
		Molinate	0.32	U	ng/L	P413007	
		Myclobutanil**	0.27	U	ng/L	P413007	
		Naled**	1.6	U	ng/L	P413007	
		Napropamide**	0.43	U	ng/L	P413007	
		Norflurazon	0.53	U	ng/L	P413007	
		Oxadiazon	0.32	U	ng/L	P413007	
		Oxyfluorfen**	0.16	U	ng/L	P413007	
		Parathion Ethyl	0.27	U	ng/L	P413007	
		Parathion Methyl	0.59	U	ng/L	P413007	
		Pendimethalin	1.1	U	ng/L	P413007	
		Phenytoin**	3.7	U	ng/L	P413007	MS
		Phorate	0.56	U	ng/L	P413007	
		Prodiamine**	0.19	U	ng/L	P413007	

Field ID: G4NW0382 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2321565	EPA 8270E	Prometon	0.96	U	ng/L	P413007	
		Prometryn	0.21	U	ng/L	P413007	
		Pronamide**	0.16	U	ng/L	P413007	
		Propanil**	0.13	U	ng/L	P413007	
		Propargite**	1.6	U	ng/L	P413007	MS
		Propiconazole**	0.53	U	ng/L	P413007	
		Pyraflufen Ethyl**	0.27	U	ng/L	P413007	
		Pyridaben**	0.48	U	ng/L	P413007	
		Pyriproxyfen**	0.13	U	ng/L	P413007	
		Simazine	0.53	U	ng/L	P413007	
		Stirophos**	0.13	U	ng/L	P413007	
		Sulfentrazone**	0.53	U	ng/L	P413007	
		Tebuconazole**	0.53	U	ng/L	P413007	
		Terbufos	0.11	U	ng/L	P413007	
		Terbuthylazine	0.45	U	ng/L	P413007	
		Thiobencarb**	0.64	U	ng/L	P413007	
		Triadimefon**	0.27	U	ng/L	P413007	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8270E: MS accuracy for atrazine not assessed due to high content of this parameter in the sample spiked. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Shoal River above Laird Rd **Collection Date/Time: 04/21/2022 14:05**

Field ID: G4NW0375 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2321563	EPA 8321B	2,4-D	0.052		ug/L	P412902	
		Acesulfame K	0.10	U	ug/L	P412884	
		2,4,5-T	0.0040	U	ug/L	P412902	
		AMPA	0.10	U	ug/L	P412884	
		Acetaminophen	0.0089	I	ug/L	P412902	
		Endothall	0.25	U	ug/L	P412884	
		Acetamiprid	0.0020	U	ug/L	P412902	MS
		Glufosinate	0.10	U	ug/L	P412884	
		Glyphosate	0.10	U	ug/L	P412884	
		Afidopyropen	0.0020	U	ug/L	P412902	RPD
		Bentazon	8.0E-04	U	ug/L	P412902	
		Sucralose	0.076		ug/L	P412884	
		Benzovindiflupyr	0.0020	U	ug/L	P412902	
		Carbamazepine	8.0E-04	U	ug/L	P412902	
		Clothianidin	0.0020	U	ug/L	P412902	
		Dinotefuran	0.0020	U	ug/L	P412902	
		Diuron	0.0020	U	ug/L	P412902	MS
		Fenuron	0.032	U	ug/L	P412902	
		Fluridone	8.0E-04	U	ug/L	P412902	
		Imazapyr	0.0095	I	ug/L	P412902	
		Hydrocodone	0.0020	U	ug/L	P412902	
		Ibuprofen	0.020	U	ug/L	P412902	
		Imidacloprid	0.0020	U	ug/L	P412902	
		Linuron	0.0040	U	ug/L	P412902	
		Mandestrobin	0.0020	U	ug/L	P412902	
		MCPP	0.0040	U	ug/L	P412902	
		Naproxen	0.0080	U	ug/L	P412902	
		Primidone	0.0040	U	ug/L	P412902	
		Pyraclostrobin	0.0020	U	ug/L	P412902	
		Silvex	0.0040	U	ug/L	P412902	
		Thiamethoxam	0.0020	U	ug/L	P412902	
		Tolfenpyrad	0.0020	U	ug/L	P412902	
		Triclopyr	0.0040	U	ug/L	P412902	

Ref. Method and Comment:
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: East Branch Pine Log Creek above Bear Bay Flats Road **Collection Date/Time: 04/21/2022 11:47**

Field ID: G4NW0208 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2321550	DEP SOP: NU-094-1	Color (true)**	120		PCU	P412785	
	EPA 180.1 Rev. 2.0	Turbidity	1.4		NTU	P412786	
	EPA 300.0 Rev. 2.1	Chloride	3.3		mg Cl/L	P413251	
		Sulfate	0.65		mg SO4/L	P413253	
	SM 2320 B-2011	Total Alkalinity	5.6		mg CaCO3/L	P413538	
	SM 2540 C-2011	TDS	46		mg/L	P413206	
	SM 2540 D-2011	TSS	2	I	mg/L	P413356	
	SM 4500-F- C-2011	Fluoride	0.035	U	mg F/L	P413543	
2321551	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P413110	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.59		mg N/L	P413268	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	I	mg N/L	P413028	
	EPA 365.1 Rev. 2.0	Total-P	0.030		mg P/L	P413050	
	SM 5310 B-2011	Organic Carbon	13		mg C/L	P413058	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Pond Creek upstream of Bob Sikes Hwy **Collection Date/Time: 04/21/2022 11:20**

Field ID: G4NW0522 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2321566	EPA 200.7 Rev. 4.4	Calcium	5.56		mg/L	P412870	
		Iron	1.37E+03		ug/L	P412870	
		Magnesium	1.71		mg/L	P412870	
		Potassium	0.95	I	mg/L	P412870	
		Sodium	2.5		mg/L	P412870	
		Strontium	16.2		ug/L	P412870	
		Tin	3.0	U	ug/L	P412870	
		Titanium	0.91	I	ug/L	P412870	
		Vanadium	2.0	U	ug/L	P412870	
		Zinc	5.0	U	ug/L	P412870	
	EPA 200.8 Rev. 5.4	Aluminum	89		ug/L	P412870	
		Antimony	0.050	U	ug/L	P412870	
		Arsenic	0.87		ug/L	P412870	
		Barium	18.5		ug/L	P412870	
		Beryllium	0.012	I	ug/L	P412870	
		Boron**	14.6		ug/L	P412870	
		Cadmium	0.020	U	ug/L	P412870	
		Chromium	0.40	U	ug/L	P412870	
		Cobalt	0.126		ug/L	P412870	
		Copper	0.40	U	ug/L	P412870	
		Lead	0.30	I	ug/L	P412870	
		Manganese	50.8		ug/L	P412870	
		Molybdenum	0.15	U	ug/L	P412870	
		Nickel	0.50	U	ug/L	P412870	
		Selenium	0.20	U	ug/L	P412870	
		Silver	0.010	U	ug/L	P412870	
		Thallium	0.10	U	ug/L	P412870	
	SM 2340 B-2011	Hardness	20.9		mg/L	P412870	

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

Sample Location: Horsehead Creek **Collection Date/Time: 04/21/2022 11:00**

Field ID: G4NW0018 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2321567	EPA 200.7 Rev. 4.4	Calcium	3.42		mg/L	P412870	
		Iron	1.22E+03		ug/L	P412870	
		Magnesium	0.98		mg/L	P412870	
		Potassium	0.73	I	mg/L	P412870	
		Sodium	2.1		mg/L	P412870	
		Strontium	11.4		ug/L	P412870	
		Tin	3.0	U	ug/L	P412870	
		Titanium	1.4	I	ug/L	P412870	
		Vanadium	2.0	U	ug/L	P412870	
		Zinc	5.0	U	ug/L	P412870	
	EPA 200.8 Rev. 5.4	Aluminum	200		ug/L	P412870	
		Antimony	0.050	U	ug/L	P412870	
		Arsenic	0.52		ug/L	P412870	
		Barium	15.8		ug/L	P412870	
		Beryllium	0.025	I	ug/L	P412870	
		Boron**	9.7		ug/L	P412870	
		Cadmium	0.020	U	ug/L	P412870	
		Chromium	0.40	U	ug/L	P412870	
		Cobalt	0.198		ug/L	P412870	
		Copper	0.40	U	ug/L	P412870	
		Lead	0.35	I	ug/L	P412870	
		Manganese	41.9		ug/L	P412870	
		Molybdenum	0.15	U	ug/L	P412870	
		Nickel	0.50	U	ug/L	P412870	
		Selenium	0.20	U	ug/L	P412870	
		Silver	0.010	U	ug/L	P412870	
		Thallium	0.10	U	ug/L	P412870	
	SM 2340 B-2011	Hardness	12.6		mg/L	P412870	

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

Sample Location: Pond Creek upstream of Steele Mill Creek Rd **Collection Date/Time: 04/21/2022 10:35**

Field ID: G4NW0062 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2321568	EPA 200.7 Rev. 4.4	Calcium	3.93		mg/L	P412870	
		Iron	1.11E+03		ug/L	P412870	
		Magnesium	1.41		mg/L	P412870	
		Potassium	0.91	I	mg/L	P412870	
		Sodium	2.1		mg/L	P412870	
		Strontium	13.5		ug/L	P412870	
		Tin	3.0	U	ug/L	P412870	
		Titanium	0.79	I	ug/L	P412870	
		Vanadium	2.0	U	ug/L	P412870	
		Zinc	5.0	U	ug/L	P412870	
	EPA 200.8 Rev. 5.4	Aluminum	110		ug/L	P412870	
		Antimony	0.050	U	ug/L	P412870	
		Arsenic	0.63		ug/L	P412870	
		Barium	20.8		ug/L	P412870	
		Beryllium	0.017	I	ug/L	P412870	
		Boron**	11.6		ug/L	P412870	
		Cadmium	0.020	U	ug/L	P412870	
		Chromium	0.40	U	ug/L	P412870	
		Cobalt	0.172		ug/L	P412870	
		Copper	0.40	U	ug/L	P412870	
		Lead	0.25	I	ug/L	P412870	
		Manganese	57.2		ug/L	P412870	
		Molybdenum	0.15	U	ug/L	P412870	
		Nickel	0.50	U	ug/L	P412870	
		Selenium	0.20	U	ug/L	P412870	
		Silver	0.010	U	ug/L	P412870	
		Thallium	0.10	U	ug/L	P412870	
	SM 2340 B-2011	Hardness	15.6		mg/L	P412870	

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

Sample Location: Horsehead Creek upstream of of Millside Rd **Collection Date/Time: 04/21/2022 10:10**

Field ID: G4NW0515 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2321569	EPA 200.7 Rev. 4.4	Calcium	3.27		mg/L	P412870	
		Iron	960		ug/L	P412870	
		Magnesium	1.18		mg/L	P412870	
		Potassium	0.69	I	mg/L	P412870	
		Sodium	2.0	I	mg/L	P412870	
		Strontium	16.0		ug/L	P412870	
		Tin	3.0	U	ug/L	P412870	
		Titanium	1.1	I	ug/L	P412870	
		Vanadium	2.0	U	ug/L	P412870	
		Zinc	5.0	U	ug/L	P412870	
	EPA 200.8 Rev. 5.4	Aluminum	164		ug/L	P412870	
		Antimony	0.050	U	ug/L	P412870	
		Arsenic	0.49		ug/L	P412870	
		Barium	24.2		ug/L	P412870	
		Beryllium	0.024	I	ug/L	P412870	
		Boron**	9.1		ug/L	P412870	
		Cadmium	0.020	U	ug/L	P412870	
		Chromium	0.40	U	ug/L	P412870	
		Cobalt	0.220		ug/L	P412870	
		Copper	0.40	U	ug/L	P412870	
		Lead	0.21	I	ug/L	P412870	
		Manganese	46.4		ug/L	P412870	
		Molybdenum	0.15	U	ug/L	P412870	
		Nickel	0.50	U	ug/L	P412870	
		Selenium	0.20	U	ug/L	P412870	
		Silver	0.010	U	ug/L	P412870	
		Thallium	0.10	U	ug/L	P412870	
	SM 2340 B-2011	Hardness	13.0		mg/L	P412870	

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

Quality Assurance Report
Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P412785

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P412786

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412870

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: P412870

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: P413251

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: P413253

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413110

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413268

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413270

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413028

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413050

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

Reference Method: EPA 8270E
Batch ID: P412694

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Bifenthrin	0.50	U	ng/L
Chlorothalonil	1.2	U	ng/L
Chlorothalonil	1.2	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cis-Nonachlor	0.20	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P412694

Component	Result	Code	Units
Cypermethrin	1.5	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.25	U	ng/L
DDT-p,p'	0.25	U	ng/L
Delta-BHC	0.40	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.25	U	ng/L
Dichlobenil	0.25	U	ng/L
Dicofol	1.2	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.40	U	ng/L
Endrin	0.40	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfluralin	0.15	U	ng/L
Ethalfluralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	5.0	U	ng/L
Kepone	5.0	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P412694

Component	Result	Code	Units
Methoprene	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.70	U	ng/L
Mirex	0.70	U	ng/L
Oxychlordane	0.30	U	ng/L
Oxychlordane	0.30	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
Permethrin	1.6	U	ng/L
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Phenothrin	0.90	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Prallethrin	2.0	U	ng/L
Prallethrin	2.0	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tetramethrin	0.75	U	ng/L
Tetramethrin	0.75	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Trifluralin	0.20	U	ng/L
Trifluralin	0.20	U	ng/L

Reference Method: EPA 8270E
Batch ID: P413007

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P413007

Component	Result	Code	Units
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
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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P413007

Component	Result	Code	Units
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	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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P413007

Component	Result	Code	Units
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
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
Terbuthylazine	0.42	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P413007

Component	Result	Code	Units
Terbuthylazine	0.42	U	ng/L
Thiobencarb	0.60	U	ng/L
Thiobencarb	0.60	U	ng/L
Triadimefon	0.25	U	ng/L
Triadimefon	0.25	U	ng/L

Reference Method: EPA 8276
Batch ID: P412694

Component	Result	Code	Units
Chlordane	2.5	U	ng/L
Chlordane	2.5	U	ng/L
Toxaphene	15	U	ng/L
Toxaphene	15	U	ng/L

Reference Method: EPA 8321B
Batch ID: P412784

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: P412884

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: P412902

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P412902

Component	Result	Code	Units
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.032	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0040	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2320 B-2011
Batch ID: P413538

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

Reference Method: SM 2540 C-2011
Batch ID: P413206

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P413356

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P413543

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P413058

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: P412785

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.2		P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P412786

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: P412870

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	107		P	85 - 115
Iron	106		P	85 - 115
Magnesium	108		P	85 - 115
Potassium	102		P	85 - 115
Sodium	100		P	85 - 115
Strontium	95.3		P	85 - 115
Tin	102		P	85 - 115
Titanium	102		P	85 - 115
Vanadium	96.2		P	85 - 115
Zinc	100		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412870

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	100		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	98.9		P	85 - 115
Barium	104		P	85 - 115
Beryllium	92.7		P	85 - 115
Boron	102		P	85 - 115
Cadmium	100		P	85 - 115
Chromium	98.0		P	85 - 115
Cobalt	98.2		P	85 - 115
Copper	97.0		P	85 - 115
Lead	98.3		P	85 - 115
Manganese	98.7		P	85 - 115
Molybdenum	99.1		P	85 - 115
Nickel	99.4		P	85 - 115
Selenium	97.6		P	85 - 115
Silver	97.1		P	85 - 115
Thallium	101		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413251

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413253

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413110

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413268

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413270

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413028

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	98.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413050

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

Reference Method: EPA 8270E
Batch ID: P412694

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	59.1		P	10 - 93.0
Alpha-BHC	95.2		P	75 - 106
Alpha-Chlordane	68.4		P	50 - 109
Beta-BHC	103		P	36 - 138
Beta-Cyfluthrin	79.3		P	23 - 167
Bifenthrin	49.6		P	11 - 123
Chlorothalonil	145		P	27 - 190
Cis-Nonachlor	62.0		P	40 - 111
Cypermethrin	59.6		P	25 - 155
Dacthal	97.5		P	72 - 119
DDD-p,p'	68.2		P	47 - 108
DDE-p,p'	81.4		P	48 - 107
DDT-p,p'	69.8		P	49 - 111
Delta-BHC	112		P	54 - 138
Deltamethrin	82.8		P	22 - 189
Dichlobenil	86.0		P	32 - 113

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P412694

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Dicofol	69.3		P	50 - 108
Dieldrin	61.9		P	56 - 110
Endosulfan I	78.2		P	60 - 105
Endosulfan II	93.0		P	50 - 120
Endosulfan Sulfate	97.2		P	55 - 121
Endrin	97.3		P	31 - 119
Endrin Aldehyde	76.0		P	36 - 116
Endrin Ketone	80.2		P	69 - 177
Esfenvalerate	88.1		P	10 - 179
Ethalfluralin	75.9		P	49 - 99.0
Fenpropathrin	60.5		P	35 - 119
Gamma-BHC	92.2		P	69 - 120
Gamma-Chlordane	70.4		P	45 - 107
Heptachlor	55.5		P	41 - 100
Heptachlor Epoxide	64.1		P	58 - 106
Hexachlorobenzene	97.2		P	39 - 100
Kepone	74.2		P	10 - 191
Lambda-Cyhalothrin	51.4		P	21 - 206
Methoprene	69.8		P	10 - 129
Methoxychlor	79.9		P	61 - 111
MGK-264	88.3		P	20 - 123
Mirex	50.4		P	10 - 182
Oxychlordane	78.4		P	39 - 110
PCB-1016	78.3		P	49 - 111
PCB-1260	82.1		P	42 - 116
Permethrin	59.2		P	26 - 152
Phenothrin	53.1		P	10 - 109
Piperonyl Butoxide	70.3		P	19 - 147
Prallethrin	71.3		P	14 - 109
Tau-Fluvalinate	68.1		P	16 - 134
Tetramethrin	70.9		P	10 - 125
Trans-Nonachlor	83.4		P	45 - 107
Triclosan Methyl	72.0		P	60 - 110
Trifluralin	69.5		P	44 - 101

Reference Method: EPA 8270E
Batch ID: P413007

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	117		P	70 - 121
Alachlor	100		P	68 - 119
Ametryn	137		P	64 - 139
Atrazine	116		P	76 - 120
Atrazine Desethyl	97.6		P	44 - 126
Avobenzone	96.6		P	76 - 212
Azinphos Methyl	111		P	43 - 192
Azoxystrobin	112		P	36 - 224
Bromacil	110		P	52 - 121
Butylate	63.3		P	28 - 91.0
Caffeine	93.3		P	50 - 134
Carbophenothion	118		P	56 - 129
Carfentrazone Ethyl	126		P	60 - 141

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P413007

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorfenapyr	97.2		P	56 - 115
Chlorpyrifos Ethyl	99.3		P	60 - 118
Chlorpyrifos Methyl	93.5		P	68 - 119
Coumaphos	111		P	18 - 250
Cyanazine	95.0		P	61 - 250
Cyprodinil	112		P	55 - 145
Demeton	71.0		P	30 - 159
Diazinon	107		P	70 - 123
Difenoconazole	127		P	49 - 204
Dimethenamid	106		P	64 - 115
Dimethomorph	104		P	12 - 219
Disulfoton	97.3		P	44 - 125
Dithiopyr	112		P	64 - 115
EPTC	53.8		P	28 - 86.0
Ethion	113		P	33 - 125
Ethoprop	106		P	64 - 116
Etridiazole	47.9		P	34 - 91.0
Fenamiphos	117		P	12 - 127
Fenbuconazole	115		P	59 - 151
Fipronil	113		P	67 - 129
Fipronil Desulfinyl	117		P	65 - 127
Fipronil Sulfide	130		F	61 - 116
Fipronil Sulfone	109		P	55 - 117
Fluazifop-P-butyl	120		P	62 - 127
Fludioxonil	118		P	62 - 128
Flumioxazin	123		P	33 - 250
Flutolanil	120		P	56 - 127
Fluxapyroxad	118		P	45 - 128
Fonofos	97.6		P	62 - 111
Hexazinone	120		P	46 - 139
Imazalil	89.0		P	38 - 142
Iprodione	123		P	47 - 135
Loratadine	111		P	10 - 244
Malathion	112		P	61 - 139
Metalaxyl	107		P	10 - 119
Metolachlor	107		P	65 - 118
Metribuzin	97.6		P	51 - 250
Mevinphos	99.6		P	53 - 121
Molinate	82.1		P	42 - 96.0
Myclobutanil	109		P	55 - 128
Naled	76.4		P	10 - 98.0
Napropamide	118		P	49 - 121
Norflurazon	111		P	61 - 126
Octinoxate	99.1		P	30 - 159
Oxadiazon	97.7		P	59 - 116
Oxybenzone	82.7		P	61 - 139
Oxyfluorfen	112		P	64 - 137
Parathion Ethyl	106		P	70 - 112
Parathion Methyl	114		P	76 - 133
Pendimethalin	77.6		P	52 - 117
Phenytoin	83.5		P	10 - 199
Phorate	72.6		P	48 - 121

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P413007

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Prodiamine	84.9		P	26 - 142
Prometon	87.4		P	43 - 123
Prometryn	107		P	66 - 127
Pronamide	107		P	75 - 121
Propanil	141		P	45 - 150
Propargite	101		P	42 - 208
Propiconazole	117		P	60 - 125
Pyraflufen Ethyl	104		P	70 - 138
Pyridaben	107		P	35 - 245
Pyriproxyfen	103		P	30 - 149
Simazine	95.5		P	72 - 125
Stirophos	110		P	29 - 164
Sulfentrazone	117		P	21 - 139
Tebuconazole	105		P	10 - 115
Terbufos	95.4		P	60 - 123
Terbuthylazine	108		P	72 - 115
Thiobencarb	94.3		P	31 - 139
Triadimefon	106		P	65 - 116

Reference Method: EPA 8276
Batch ID: P412694

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	85.6		P	61 - 118
Toxaphene	87.9		P	51 - 122

Reference Method: EPA 8321B
Batch ID: P412784

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	57.2		P	30 - 160
Aldicarb	44.9		P	30 - 150
Aldicarb Sulfone	85.9		P	30 - 160
Aldicarb Sulfoxide	91.5		P	30 - 160
Carbaryl	82.6		P	30 - 160
Carbofuran	84.8		P	30 - 160
Methiocarb	79.9		P	30 - 160
Methomyl	85.7		P	30 - 160
Oxamyl	86.5		P	30 - 160
Propoxur	80.7		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P412884

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	99.2		P	40 - 150
AMPA	110		P	40 - 150
Endothall	96.3		P	40 - 150
Glufosinate	109		P	40 - 150
Glyphosate	98.2		P	40 - 150
Sucralose	94.0		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P412902

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	68.2		P	40 - 150
2,4,5-T	71.8		P	40 - 150
Acetaminophen	83.8		P	30 - 150
Acetamiprid	59.2		P	40 - 150
Afidopyropen	40.9		P	40 - 150
Bentazon	65.7		P	30 - 150
Benzovindiflupyr	71.0		P	40 - 150
Carbamazepine	58.7		P	40 - 150
Clothianidin	79.2		P	40 - 150
Dinotefuran	98.2		P	40 - 150
Diuron	70.9		P	40 - 150
Fenuron	81.3		P	40 - 150
Fluridone	68.5		P	40 - 150
Hydrocodone	91.3		P	40 - 150
Ibuprofen	60.6		P	40 - 150
Imazapyr	81.2		P	40 - 150
Imidacloprid	67.6		P	40 - 150
Linuron	56.7		P	40 - 150
Mandestrobin	60.2		P	40 - 150
MCPP	82.6		P	40 - 150
Naproxen	40.2		P	40 - 150
Primidone	83.1		P	40 - 150
Pyraclostrobin	65.1		P	40 - 150
Silvex	82.1		P	40 - 150
Thiamethoxam	78.4		P	40 - 150
Tolfenpyrad	40.5		P	30 - 150
Triclopyr	77.9		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P413538

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: P413543

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.8		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P413058

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.6		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412870

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2320881	Calcium	108	109	P/P	80 - 120
2320881	Iron	111	108	P/P	80 - 120
2320881	Magnesium	112	109	P/P	80 - 120
2320881	Potassium	109	105	P/P	80 - 120
2320881	Sodium	104	104	P/P	80 - 120
2320881	Strontium	102	102	P/P	80 - 120
2320881	Tin	102	103	P/P	80 - 120
2320881	Titanium	104	104	P/P	80 - 120
2320881	Vanadium	97.8	98.1	P/P	80 - 120
2320881	Zinc	102	102	P/P	80 - 120
2321569	Calcium	110		P	80 - 120
2321569	Iron	110		P	80 - 120
2321569	Magnesium	112		P	80 - 120
2321569	Potassium	101		P	80 - 120
2321569	Sodium	104		P	80 - 120
2321569	Strontium	100		P	80 - 120
2321569	Tin	103		P	80 - 120
2321569	Titanium	103		P	80 - 120
2321569	Vanadium	98.6		P	80 - 120
2321569	Zinc	105		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412870

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2320881	Aluminum	108	106	P/P	80 - 120
2320881	Antimony	97.9	101	P/P	80 - 120
2320881	Arsenic	95.8	98.1	P/P	80 - 120
2320881	Barium	102	105	P/P	80 - 120
2320881	Beryllium	94.6	95.3	P/P	80 - 120
2320881	Boron	102	104	P/P	80 - 120
2320881	Cadmium	96.7	99.5	P/P	80 - 120
2320881	Chromium	98.0	98.8	P/P	80 - 120
2320881	Cobalt	96.9	98.9	P/P	80 - 120
2320881	Copper	95.9	97.1	P/P	80 - 120
2320881	Lead	98.1	100	P/P	80 - 120
2320881	Manganese	97.9	100	P/P	80 - 120
2320881	Molybdenum	97.3	100	P/P	80 - 120
2320881	Nickel	97.3	98.8	P/P	80 - 120
2320881	Selenium	95.6	97.6	P/P	80 - 120
2320881	Silver	93.8	96.2	P/P	80 - 120
2320881	Thallium	101	103	P/P	80 - 120
2321569	Aluminum	102		P	80 - 120
2321569	Antimony	98.1		P	80 - 120
2321569	Arsenic	95.3		P	80 - 120
2321569	Barium	99.8		P	80 - 120
2321569	Beryllium	92.7		P	80 - 120
2321569	Boron	103		P	80 - 120
2321569	Cadmium	96.2		P	80 - 120
2321569	Chromium	96.9		P	80 - 120
2321569	Cobalt	94.2		P	80 - 120
2321569	Copper	94.4		P	80 - 120

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412870

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321569	Lead	96.8		P	80 - 120
2321569	Molybdenum	97.2		P	80 - 120
2321569	Nickel	96.3		P	80 - 120
2321569	Selenium	92.2		P	80 - 120
2321569	Silver	93.7		P	80 - 120
2321569	Thallium	99.2		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413251

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321410	Chloride	98.0		P	90 - 110
2321550	Chloride	97.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413253

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321410	Sulfate	97.2		P	90 - 110
2321550	Sulfate	97.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413110

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321367	Ammonia-N	99.6	97.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413268

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321459	Kjeldahl Nitrogen	106	106	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413270

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321888	Kjeldahl Nitrogen	101	110	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413028

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321549	NO2NO3-N	93.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413050

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321490	Total-P	104	103	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P412694

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2320549	PCB-1016	78.9	72.4	P/P	46 - 110
2320549	PCB-1260	85.3	69.1	P/P	42 - 111
2320641	Aldrin	56.0	49.9	P/P	10 - 89.0
2320641	Alpha-BHC	91.8	92.3	P/P	71 - 105
2320641	Alpha-Chlordane	69.5	67.2	P/P	43 - 107
2320641	Beta-BHC	100	136	P/P	57 - 152
2320641	Beta-Cyfluthrin	92.1	78.8	P/P	29 - 186
2320641	Bifenthrin	49.2	47.3	P/P	19 - 119
2320641	Chlorothalonil	164	118	P/P	10 - 245
2320641	Cis-Nonachlor	50.4	48.7	P/P	36 - 110
2320641	Cypermethrin	61.7	59.1	P/P	24 - 169
2320641	Dacthal	95.2	90.0	P/P	62 - 115
2320641	DDD-p,p'	53.5	58.8	P/P	36 - 109
2320641	DDE-p,p'	73.7	73.1	P/P	30 - 114
2320641	DDT-p,p'	58.6	62.0	P/P	42 - 108
2320641	Delta-BHC	114	143	P/P	60 - 164
2320641	Deltamethrin	110	92.5	P/P	10 - 210
2320641	Dichlobenil	69.1	85.4	P/P	23 - 108
2320641	Dicofol	59.9	61.6	P/P	44 - 109
2320641	Dieldrin	56.0	58.4	P/P	37 - 119
2320641	Endosulfan I	81.7	78.1	P/P	52 - 105
2320641	Endosulfan II	87.3	79.7	P/P	35 - 127
2320641	Endosulfan Sulfate	83.5	77.5	P/P	39 - 130
2320641	Endrin	81.8	75.8	P/P	30 - 116
2320641	Endrin Aldehyde	56.0	64.7	P/P	20 - 110
2320641	Endrin Ketone	78.0	73.2	P/P	48 - 134
2320641	Esfenvalerate	105	91.7	P/P	10 - 199
2320641	Ethalfluralin	57.8	69.2	P/P	48 - 95.0
2320641	Fenpropathrin	52.8	58.2	P/P	37 - 121
2320641	Gamma-BHC	108	106	P/P	61 - 126
2320641	Gamma-Chlordane	71.9	73.4	P/P	39 - 105
2320641	Heptachlor	43.6	44.4	P/P	38 - 96.0
2320641	Heptachlor Epoxide	54.0	57.1	P/P	42 - 114
2320641	Hexachlorobenzene	51.8	74.7	P/P	39 - 93.0
2320641	Kepone	81.8	78.3	P/P	10 - 215
2320641	Lambda-Cyhalothrin	60.0	52.6	P/P	10 - 204
2320641	Methoprene	78.0	66.6	P/P	17 - 108
2320641	Methoxychlor	67.1	75.1	P/P	56 - 115
2320641	MGK-264	91.4	78.9	P/P	35 - 120
2320641	Mirex	50.3	48.2	P/P	10 - 178
2320641	Oxychlordane	68.8	70.2	P/P	47 - 91.0
2320641	Permethrin	66.7	63.3	P/P	27 - 170
2320641	Phenothrin	70.8	85.0	P/P	10 - 133
2320641	Piperonyl Butoxide	71.5	69.4	P/P	23 - 150
2320641	Prallethrin	74.3	70.0	P/P	21 - 113
2320641	Tau-Fluvalinate	87.8	83.7	P/P	16 - 158
2320641	Tetramethrin	74.9	76.4	P/P	22 - 132
2320641	Trans-Nonachlor	74.9	74.9	P/P	43 - 102
2320641	Triclosan Methyl	74.9	76.8	P/P	49 - 109
2320641	Trifluralin	61.8	58.3	P/P	48 - 93.0

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P413007

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321429	Acetochlor	98.4	92.8	P/P	65 - 124
2321429	Alachlor	88.9	81.6	P/P	61 - 121
2321429	Ametryn	66.7	63.8	P/P	52 - 216
2321429	Atrazine Desethyl	62.7	63.2	P/P	15 - 160
2321429	Avobenzone	125	113	P/P	59 - 206
2321429	Azinphos Methyl	107	95.0	P/P	40 - 292
2321429	Azoxystrobin	120	118	P/P	12 - 242
2321429	Bromacil	81.3	86.3	P/P	54 - 167
2321429	Butylate	59.5	54.7	P/P	14 - 94.0
2321429	Caffeine	87.6	81.2	P/P	10 - 226
2321429	Carbophenothion	90.2	82.7	P/P	49 - 122
2321429	Carfentrazone Ethyl	93.1	80.8	P/P	53 - 138
2321429	Chlorfenapyr	83.2	76.9	P/P	50 - 150
2321429	Chlorpyrifos Ethyl	95.8	88.3	P/P	52 - 122
2321429	Chlorpyrifos Methyl	102	91.0	P/P	66 - 117
2321429	Coumaphos	85.0	81.9	P/P	50 - 220
2321429	Cyanazine	77.5	67.4	P/P	43 - 245
2321429	Cyprodinil	96.7	81.2	P/P	50 - 150
2321429	Demeton	88.0	81.0	P/P	43 - 188
2321429	Diazinon	98.1	90.0	P/P	69 - 131
2321429	Difenoconazole	103	104	P/P	34 - 231
2321429	Dimethenamid	85.7	74.8	P/P	55 - 118
2321429	Dimethomorph	134	128	P/P	50 - 150
2321429	Disulfoton	83.7	82.7	P/P	38 - 141
2321429	Dithiopyr	101	91.2	P/P	42 - 116
2321429	EPTC	39.3	36.7	P/P	18 - 85.0
2321429	Ethion	61.8	55.9	P/P	10 - 131
2321429	Ethoprop	91.3	85.7	P/P	65 - 129
2321429	Etridiazole	61.1	52.5	P/P	50 - 150
2321429	Fenamiphos	72.1	76.0	P/P	31 - 137
2321429	Fenbuconazole	88.9	75.9	P/P	57 - 160
2321429	Fipronil	96.5	84.4	P/P	62 - 132
2321429	Fipronil Desulfinyl	95.3	88.1	P/P	57 - 131
2321429	Fipronil Sulfide	97.2	84.7	P/P	15 - 138
2321429	Fipronil Sulfone	92.4	82.5	P/P	21 - 134
2321429	Fluazifop-P-butyl	108	95.7	P/P	54 - 133
2321429	Fludioxonil	96.1	83.9	P/P	58 - 127
2321429	Flumioxazin	133	128	P/P	33 - 300
2321429	Flutolanil	73.6	69.3	P/P	42 - 130
2321429	Fluxapyroxad	82.0	69.8	P/P	23 - 141
2321429	Fonofos	98.9	90.3	P/P	58 - 119
2321429	Hexazinone	96.7	89.0	P/P	68 - 172
2321429	Imazalil	252	213	P/P	48 - 283
2321429	Iprodione	84.8	79.6	P/P	38 - 140
2321429	Loratadine	119	121	P/P	50 - 150
2321429	Malathion	87.1	85.3	P/P	40 - 137
2321429	Metalaxyl	95.5	82.7	P/P	21 - 129
2321429	Metolachlor	89.6	79.5	P/P	55 - 122
2321429	Metribuzin	81.5	77.7	P/P	38 - 187
2321429	Mevinphos	93.7	89.3	P/P	54 - 134
2321429	Molinate	69.1	68.3	P/P	41 - 97.0
2321429	Myclobutanil	82.1	79.3	P/P	56 - 125

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P413007

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321429	Naled	101	90.0	P/P	10 - 108
2321429	Napropamide	83.3	75.2	P/P	50 - 150
2321429	Norflurazon	75.5	70.6	P/P	32 - 122
2321429	Octinoxate	118	100	P/P	25 - 150
2321429	Oxadiazon	60.5	53.4	P/P	40 - 119
2321429	Oxybenzone	89.1	82.2	P/P	59 - 147
2321429	Oxyfluorfen	109	98.7	P/P	61 - 153
2321429	Parathion Ethyl	97.0	81.1	P/P	59 - 130
2321429	Parathion Methyl	100	93.1	P/P	65 - 155
2321429	Pendimethalin	102	87.4	P/P	49 - 138
2321429	Phenytoin	43.1	32.7	F/F	50 - 200
2321429	Phorate	95.2	83.5	P/P	54 - 161
2321429	Prodiamine	54.8	51.5	P/P	33 - 161
2321429	Prometon	75.9	69.6	P/P	48 - 140
2321429	Prometryn	84.0	73.7	P/P	55 - 134
2321429	Pronamide	97.1	86.2	P/P	66 - 137
2321429	Propanil	116	109	P/P	50 - 150
2321429	Propargite	43.6	41.3	F/F	50 - 200
2321429	Propiconazole	82.7	70.3	P/P	36 - 150
2321429	Pyraflufen Ethyl	71.9	65.3	P/P	50 - 150
2321429	Pyridaben	86.7	77.4	P/P	50 - 200
2321429	Pyriproxyfen	75.3	65.4	P/P	10 - 165
2321429	Simazine	85.5	78.4	P/P	57 - 145
2321429	Stirophos	61.8	55.7	P/P	50 - 150
2321429	Sulfentrazone	92.6	71.3	P/P	34 - 140
2321429	Tebuconazole	38.3	34.2	P/P	10 - 127
2321429	Terbufos	110	104	P/P	59 - 138
2321429	Terbuthylazine	94.6	87.7	P/P	68 - 119
2321429	Thiobencarb	79.1	72.5	P/P	50 - 150
2321429	Triadimefon	104	103	P/P	50 - 150

Reference Method: EPA 8276
Batch ID: P412694

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2320549	Chlordane	102	80.8	P/P	55 - 128
2320549	Toxaphene	113	95.4	P/P	57 - 211

Reference Method: EPA 8321B
Batch ID: P412784

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2320421	3-Hydroxycarbofuran	62.0	82.7	P/P	30 - 160
2320421	Aldicarb	47.6	74.9	P/P	30 - 150
2320421	Aldicarb Sulfone	119	111	P/P	30 - 160
2320421	Aldicarb Sulfoxide	53.3	50.8	P/P	30 - 160
2320421	Carbaryl	85.6	82.9	P/P	30 - 160
2320421	Carbofuran	93.2	90.1	P/P	30 - 160
2320421	Methiocarb	85.3	82.5	P/P	30 - 160
2320421	Methomyl	99.3	95.3	P/P	30 - 160
2320421	Oxamyl	108	112	P/P	30 - 160
2320421	Propoxur	92.1	79.6	P/P	30 - 160

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P412884

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321562	Acesulfame K	95.6	96.3	P/P	40 - 150
2321562	AMPA	106	102	P/P	40 - 150
2321562	Endothall	96.2	95.1	P/P	40 - 150
2321562	Glufosinate	112	93.5	P/P	40 - 150
2321562	Glyphosate	83.0	79.7	P/P	40 - 150
2321562	Sucralose	97.2	95.8	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P412902

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321475	2,4-D	56.7	54.2	P/P	40 - 150
2321475	2,4,5-T	73.4	72.9	P/P	40 - 150
2321475	Acetaminophen	116	109	P/P	30 - 150
2321475	Acetamiprid	30.5	23.6	F/F	40 - 150
2321475	Afidopyropen	60.3	43.2	P/P	40 - 150
2321475	Benzovindiflupyr	46.4	46.2	P/P	40 - 150
2321475	Carbamazepine	46.7	45.9	P/P	40 - 150
2321475	Clothianidin	57.7	57.2	P/P	40 - 150
2321475	Dinotefuran	93.5	92.2	P/P	40 - 150
2321475	Diuron	37.5	36.7	F/F	40 - 150
2321475	Fenuron	45.9	46.3	P/P	40 - 150
2321475	Fluridone	45.6	45.2	P/P	40 - 150
2321475	Hydrocodone	42.9	43.1	P/P	40 - 150
2321475	Ibuprofen	54.4	47.8	P/P	40 - 150
2321475	Imidacloprid	43.2	44.2	P/P	40 - 150
2321475	Linuron	44.7	43.8	P/P	40 - 150
2321475	Mandestrobin	49.5	50.6	P/P	40 - 150
2321475	MCPP	91.3	86.3	P/P	40 - 150
2321475	Naproxen	42.1	43.9	P/P	40 - 150
2321475	Primidone	54.6	53.5	P/P	40 - 150
2321475	Pyraclostrobin	62.9	62.7	P/P	40 - 150
2321475	Silvex	83.3	80.6	P/P	40 - 150
2321475	Thiamethoxam	40.9	42.0	P/P	40 - 150
2321475	Tolfenpyrad	36.0	33.7	P/P	30 - 150
2321475	Triclopyr	75.6	71.1	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P413543

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321899	Fluoride	98.7	98.0	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P413058

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321328	Organic Carbon	99.1	101	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P412785

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321456	Color (true)	0.774	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P412786

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321433	Turbidity	1.81	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412870

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2320881	Calcium	1.15	Spike	P	0 - 20
2320881	Iron	2.48	Spike	P	0 - 20
2320881	Magnesium	2.20	Spike	P	0 - 20
2320881	Potassium	3.39	Spike	P	0 - 20
2320881	Sodium	0.0828	Spike	P	0 - 20
2320881	Strontium	0.417	Spike	P	0 - 20
2320881	Tin	0.891	Spike	P	0 - 20
2320881	Titanium	0.0766	Spike	P	0 - 20
2320881	Vanadium	0.269	Spike	P	0 - 20
2320881	Zinc	0.772	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412870

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2320881	Aluminum	1.96	Spike	P	0 - 20
2320881	Antimony	2.80	Spike	P	0 - 20
2320881	Arsenic	2.40	Spike	P	0 - 20
2320881	Barium	2.49	Spike	P	0 - 20
2320881	Beryllium	0.692	Spike	P	0 - 20
2320881	Boron	1.58	Spike	P	0 - 20
2320881	Cadmium	2.89	Spike	P	0 - 20
2320881	Chromium	0.819	Spike	P	0 - 20
2320881	Cobalt	2.02	Spike	P	0 - 20
2320881	Copper	1.22	Spike	P	0 - 20
2320881	Lead	2.33	Spike	P	0 - 20
2320881	Manganese	1.86	Spike	P	0 - 20
2320881	Molybdenum	3.13	Spike	P	0 - 20
2320881	Nickel	1.46	Spike	P	0 - 20
2320881	Selenium	2.09	Spike	P	0 - 20
2320881	Silver	2.58	Spike	P	0 - 20
2320881	Thallium	2.61	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413251

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321410	Chloride	0.248	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413110

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321367	Ammonia-N	1.70	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413268

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321459	Kjeldahl Nitrogen	0.178	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413270

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321888	Kjeldahl Nitrogen	5.45	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413028

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321549	NO2NO3-N	0.190	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413050

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321490	Total-P	0.683	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P412694

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2320549	PCB-1016	8.58	Spike	P	0 - 32
2320549	PCB-1260	21.0	Spike	P	0 - 31
2320641	Aldrin	11.5	Spike	P	0 - 37
2320641	Alpha-BHC	0.621	Spike	P	0 - 16
2320641	Alpha-Chlordane	3.38	Spike	P	0 - 28
2320641	Beta-BHC	30.7	Spike	P	0 - 32
2320641	Beta-Cyfluthrin	15.5	Spike	P	0 - 41
2320641	Bifenthrin	3.95	Spike	P	0 - 36
2320641	Chlorothalonil	32.6	Spike	P	0 - 54

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P412694

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2320641	Cis-Nonachlor	3.48	Spike	P	0 - 33
2320641	Cypermethrin	4.35	Spike	P	0 - 38
2320641	Dacthal	5.65	Spike	P	0 - 23
2320641	DDD-p,p'	9.54	Spike	P	0 - 35
2320641	DDE-p,p'	0.762	Spike	P	0 - 27
2320641	DDT-p,p'	5.61	Spike	P	0 - 31
2320641	Delta-BHC	22.4	Spike	P	0 - 30
2320641	Deltamethrin	17.7	Spike	P	0 - 76
2320641	Dichlobenil	21.1	Spike	P	0 - 33
2320641	Dicofol	2.80	Spike	P	0 - 24
2320641	Dieldrin	4.25	Spike	P	0 - 35
2320641	Endosulfan I	4.56	Spike	P	0 - 25
2320641	Endosulfan II	9.07	Spike	P	0 - 31
2320641	Endosulfan Sulfate	7.40	Spike	P	0 - 38
2320641	Endrin	7.66	Spike	P	0 - 53
2320641	Endrin Aldehyde	14.5	Spike	P	0 - 81
2320641	Endrin Ketone	6.39	Spike	P	0 - 33
2320641	Esfenvalerate	13.3	Spike	P	0 - 46
2320641	Ethalfluralin	18.0	Spike	P	0 - 22
2320641	Fenpropathrin	9.70	Spike	P	0 - 29
2320641	Gamma-BHC	1.70	Spike	P	0 - 17
2320641	Gamma-Chlordane	2.01	Spike	P	0 - 28
2320641	Heptachlor	1.98	Spike	P	0 - 28
2320641	Heptachlor Epoxide	5.67	Spike	P	0 - 23
2320641	Hexachlorobenzene	36.2	Spike	F	0 - 22
2320641	Kepone	4.37	Spike	P	0 - 61
2320641	Lambda-Cyhalothrin	13.2	Spike	P	0 - 52
2320641	Methoprene	15.8	Spike	P	0 - 38
2320641	Methoxychlor	11.2	Spike	P	0 - 29
2320641	MGK-264	14.8	Spike	P	0 - 41
2320641	Mirex	4.30	Spike	P	0 - 39
2320641	Oxychlordane	2.02	Spike	P	0 - 33
2320641	Permethrin	5.31	Spike	P	0 - 39
2320641	Phenothrin	18.3	Spike	P	0 - 52
2320641	Piperonyl Butoxide	2.99	Spike	P	0 - 91
2320641	Prallethrin	6.08	Spike	P	0 - 34
2320641	Tau-Fluvalinate	4.86	Spike	P	0 - 41
2320641	Tetramethrin	1.96	Spike	P	0 - 43
2320641	Trans-Nonachlor	0.0876	Spike	P	0 - 31
2320641	Triclosan Methyl	2.55	Spike	P	0 - 24
2320641	Trifluralin	5.84	Spike	P	0 - 23

Reference Method: EPA 8270E
Batch ID: P413007

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321429	Acetochlor	5.91	Spike	P	0 - 27
2321429	Alachlor	8.54	Spike	P	0 - 27
2321429	Ametryn	4.42	Spike	P	0 - 34
2321429	Atrazine	11.4	Spike	P	0 - 41

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P413007

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321429	Atrazine Desethyl	0.699	Spike	P	0 - 38
2321429	Avobenzone	9.58	Spike	P	0 - 30
2321429	Azinphos Methyl	12.0	Spike	P	0 - 62
2321429	Azoxystrobin	1.48	Spike	P	0 - 32
2321429	Bromacil	5.88	Spike	P	0 - 30
2321429	Butylate	8.45	Spike	P	0 - 59
2321429	Caffeine	7.50	Spike	P	0 - 60
2321429	Carbophenothion	8.75	Spike	P	0 - 25
2321429	Carfentrazone Ethyl	14.2	Spike	P	0 - 26
2321429	Chlorfenapyr	7.86	Spike	P	0 - 30
2321429	Chlorpyrifos Ethyl	8.06	Spike	P	0 - 27
2321429	Chlorpyrifos Methyl	11.0	Spike	P	0 - 26
2321429	Coumaphos	3.67	Spike	P	0 - 30
2321429	Cyanazine	13.9	Spike	P	0 - 58
2321429	Cyprodinil	17.4	Spike	P	0 - 30
2321429	Demeton	8.22	Spike	P	0 - 25
2321429	Diazinon	8.58	Spike	P	0 - 29
2321429	Difenoconazole	1.61	Spike	P	0 - 25
2321429	Dimethenamid	13.5	Spike	P	0 - 30
2321429	Dimethomorph	4.08	Spike	P	0 - 30
2321429	Disulfoton	1.19	Spike	P	0 - 33
2321429	Dithiopyr	10.0	Spike	P	0 - 22
2321429	EPTC	6.75	Spike	P	0 - 38
2321429	Ethion	10.0	Spike	P	0 - 79
2321429	Ethoprop	6.28	Spike	P	0 - 23
2321429	Etridiazole	15.2	Spike	P	0 - 30
2321429	Fenamiphos	5.22	Spike	P	0 - 58
2321429	Fenbuconazole	15.7	Spike	P	0 - 37
2321429	Fipronil	13.4	Spike	P	0 - 33
2321429	Fipronil Desulfinyl	7.87	Spike	P	0 - 26
2321429	Fipronil Sulfide	13.7	Spike	P	0 - 37
2321429	Fipronil Sulfone	10.1	Spike	P	0 - 50
2321429	Fluazifop-P-butyl	12.5	Spike	P	0 - 24
2321429	Fludioxonil	13.6	Spike	P	0 - 26
2321429	Flumioxazin	4.25	Spike	P	0 - 37
2321429	Flutolanil	5.74	Spike	P	0 - 26
2321429	Fluxapyroxad	16.1	Spike	P	0 - 34
2321429	Fonofos	9.14	Spike	P	0 - 27
2321429	Hexazinone	8.38	Spike	P	0 - 36
2321429	Imazalil	16.9	Spike	P	0 - 65
2321429	Iprodione	6.27	Spike	P	0 - 33
2321429	Loratadine	1.50	Spike	P	0 - 30
2321429	Malathion	2.09	Spike	P	0 - 44
2321429	Metalaxyl	14.4	Spike	P	0 - 38
2321429	Metolachlor	11.9	Spike	P	0 - 36
2321429	Metribuzin	4.84	Spike	P	0 - 63
2321429	Mevinphos	4.81	Spike	P	0 - 26
2321429	Molinate	1.19	Spike	P	0 - 40
2321429	Myclobutanil	3.48	Spike	P	0 - 21
2321429	Naled	11.9	Spike	P	0 - 26
2321429	Napropamide	10.3	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P413007

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321429	Norflurazon	6.64	Spike	P	0 - 24
2321429	Octinoxate	12.9	Spike	P	0 - 30
2321429	Oxadiazon	8.64	Spike	P	0 - 27
2321429	Oxybenzone	8.04	Spike	P	0 - 30
2321429	Oxyfluorfen	9.69	Spike	P	0 - 24
2321429	Parathion Ethyl	17.9	Spike	P	0 - 28
2321429	Parathion Methyl	7.26	Spike	P	0 - 27
2321429	Pendimethalin	15.6	Spike	P	0 - 31
2321429	Phenytoin	27.4	Spike	P	0 - 30
2321429	Phorate	13.1	Spike	P	0 - 27
2321429	Prodiamine	6.29	Spike	P	0 - 52
2321429	Prometon	8.69	Spike	P	0 - 31
2321429	Prometryn	13.1	Spike	P	0 - 28
2321429	Pronamide	11.9	Spike	P	0 - 26
2321429	Propanil	6.70	Spike	P	0 - 30
2321429	Propargite	5.34	Spike	P	0 - 30
2321429	Propiconazole	16.2	Spike	P	0 - 31
2321429	Pyraflufen Ethyl	9.74	Spike	P	0 - 30
2321429	Pyridaben	11.3	Spike	P	0 - 30
2321429	Pyriproxyfen	14.1	Spike	P	0 - 50
2321429	Simazine	8.75	Spike	P	0 - 29
2321429	Stirophos	10.4	Spike	P	0 - 30
2321429	Sulfentrazone	15.3	Spike	P	0 - 33
2321429	Tebuconazole	11.3	Spike	P	0 - 44
2321429	Terbufos	5.41	Spike	P	0 - 29
2321429	Terbuthylazine	7.60	Spike	P	0 - 27
2321429	Thiobencarb	8.78	Spike	P	0 - 30
2321429	Triadimefon	1.26	Spike	P	0 - 30

Reference Method: EPA 8276
Batch ID: P412694

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2320549	Chlordane	23.3	Spike	P	0 - 25
2320549	Toxaphene	17.1	Spike	P	0 - 24

Reference Method: EPA 8321B
Batch ID: P412784

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2320421	3-Hydroxycarbofuran	28.6	Spike	P	0 - 30
2320421	Aldicarb	44.5	Spike	F	0 - 30
2320421	Aldicarb Sulfone	6.65	Spike	P	0 - 30
2320421	Aldicarb Sulfoxide	4.82	Spike	P	0 - 30
2320421	Carbaryl	3.25	Spike	P	0 - 30
2320421	Carbofuran	3.36	Spike	P	0 - 30
2320421	Methiocarb	3.32	Spike	P	0 - 30
2320421	Methomyl	4.08	Spike	P	0 - 30
2320421	Oxamyl	3.77	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P412784

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2320421	Propoxur	14.5	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P412884

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321562	Acesulfame K	0.663	Spike	P	0 - 30
2321562	AMPA	4.34	Spike	P	0 - 30
2321562	Endothall	1.10	Spike	P	0 - 30
2321562	Glufosinate	18.3	Spike	P	0 - 30
2321562	Glyphosate	4.13	Spike	P	0 - 30
2321562	Sucralose	1.43	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P412902

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321475	2,4-D	3.97	Spike	P	0 - 30
2321475	2,4,5-T	0.644	Spike	P	0 - 30
2321475	Acetaminophen	5.98	Spike	P	0 - 30
2321475	Acetamiprid	25.7	Spike	P	0 - 30
2321475	Afidopyropen	32.9	Spike	F	0 - 30
2321475	Bentazon	0.652	Spike	P	0 - 30
2321475	Benzovindiflupyr	0.547	Spike	P	0 - 30
2321475	Carbamazepine	1.68	Spike	P	0 - 30
2321475	Clothianidin	0.790	Spike	P	0 - 30
2321475	Dinotefuran	1.43	Spike	P	0 - 30
2321475	Diuron	2.23	Spike	P	0 - 30
2321475	Fenuron	0.728	Spike	P	0 - 30
2321475	Fluridone	0.640	Spike	P	0 - 30
2321475	Hydrocodone	0.664	Spike	P	0 - 30
2321475	Ibuprofen	12.9	Spike	P	0 - 30
2321475	Imazapyr	0.285	Spike	P	0 - 30
2321475	Imidacloprid	2.41	Spike	P	0 - 30
2321475	Linuron	1.93	Spike	P	0 - 30
2321475	Mandestrobin	2.21	Spike	P	0 - 30
2321475	MCPP	5.70	Spike	P	0 - 30
2321475	Naproxen	4.02	Spike	P	0 - 30
2321475	Primidone	2.04	Spike	P	0 - 30
2321475	Pyraclostrobin	0.253	Spike	P	0 - 30
2321475	Silvex	3.38	Spike	P	0 - 30
2321475	Thiamethoxam	2.76	Spike	P	0 - 30
2321475	Tolfenpyrad	6.67	Spike	P	0 - 30
2321475	Triclopyr	6.10	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: SM 2320 B-2011
Batch ID: P413538

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321899	Total Alkalinity	3.13	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P413206

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321337	TDS	1.08	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P413543

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321899	Fluoride	0.492	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P413058

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321328	Organic Carbon	1.50	Spike	P	0 - 20

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2321561
Field Sample ID: G4NW0382

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	72.0	P	30 - 160

Lab Sample ID: 2321562
Field Sample ID: G4NW0382

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	66.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	112	P	30 - 160
EPA 8321B	Carbamazepine-d10	47.7	P	30 - 160
EPA 8321B	Diuron-d6	38.0	P	30 - 160
EPA 8321B	Endothall-d6	98.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	81.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	59.6	P	30 - 160
EPA 8321B	Primidone-d5	69.5	P	30 - 160
EPA 8321B	Sucralose-d6	95.3	P	30 - 160

Lab Sample ID: 2321563
Field Sample ID: G4NW0375

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	71.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	124	P	30 - 160
EPA 8321B	Carbamazepine-d10	51.7	P	30 - 160
EPA 8321B	Diuron-d6	42.1	P	30 - 160
EPA 8321B	Endothall-d6	88.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	69.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	61.1	P	30 - 160
EPA 8321B	Primidone-d5	78.6	P	30 - 160
EPA 8321B	Sucralose-d6	86.9	P	30 - 160

Lab Sample ID: 2321564
Field Sample ID: G4NW0382

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	99.9	P	38 - 115
EPA 8270E	Decachlorobiphenyl	72.1	P	31 - 118
EPA 8270E	Tetrachloro-m-xylene	64.9	P	29 - 98.0
EPA 8270E	Tetrachloro-m-xylene	60.4	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	65.4	P	30 - 97.0
EPA 8276	PCNB	74.7	P	45 - 119

Lab Sample ID: 2321565
Field Sample ID: G4NW0382

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	97.6	P	20 - 200
EPA 8270E	Simazine-d10	114	P	71 - 140
EPA 8270E	Terbufos-d10	108	P	62 - 131
EPA 8270E	Terphenyl-d14	76.3	P	50 - 124

Quality Assurance Report
Calibration Verification

Reference Method: DEP SOP: NU-094-1
Run ID: A111643
Included Lab Sample IDs: 2321548, 2321550

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.1	100	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A111646
Included Lab Sample IDs: 2321548, 2321550

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

Reference Method: EPA 8270E
Run ID: A111710
Included Lab Sample IDs: 2321564

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	98.1		P	80 - 120
Alpha-BHC	98.0		P	80 - 120
Alpha-Chlordane	98.2		P	80 - 120
Beta-BHC	110		P	80 - 120
Beta-Cyfluthrin	107		P	80 - 120
Bifenthrin	99.9		P	80 - 120
Chlorothalonil	94.0		P	80 - 120
Cis-Nonachlor	93.7		P	80 - 120
Cypermethrin	90.6		P	80 - 120
Dacthal	109		P	80 - 120
DDD-p,p'	88.9		P	80 - 120
DDE-p,p'	95.3		P	80 - 120
DDT-p,p'	103		P	80 - 120
Delta-BHC	109		P	80 - 120
Deltamethrin	101		P	80 - 120
Dichlobenil	116		P	80 - 120
Dicofol	104		P	80 - 120
Dieldrin	88.9		P	80 - 120
Endosulfan I	103		P	80 - 120
Endosulfan II	101		P	80 - 120
Endosulfan Sulfate	96.1		P	80 - 120
Endrin	105		P	80 - 120
Endrin Aldehyde	96.8		P	80 - 120
Endrin Ketone	108		P	80 - 120
Esfenvalerate	103		P	80 - 120
Ethalfluralin	114		P	80 - 120
Fenpropathrin	103		P	80 - 120
Gamma-BHC	98.5		P	80 - 120
Gamma-Chlordane	100		P	80 - 120
Heptachlor	105		P	80 - 120
Heptachlor Epoxide	85.5		P	80 - 120
Hexachlorobenzene	106		P	80 - 120
Kepone	83.6		P	80 - 120
Lambda-Cyhalothrin	96.9		P	80 - 120
Methoprene	116		P	80 - 120
Methoxychlor	106		P	80 - 120
MGK-264	99.3		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A111710
Included Lab Sample IDs: 2321564

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Mirex	95.8		P	80 - 120
Oxychlordane	102		P	80 - 120
Permethrin	100		P	80 - 120
Phenothrin	92.8		P	80 - 120
Piperonyl Butoxide	102		P	80 - 120
Prallethrin	92.8		P	80 - 120
Tau-Fluvalinate	98.6		P	80 - 120
Tetramethrin	99.1		P	80 - 120
Trans-Nonachlor	101		P	80 - 120
Triclosan Methyl	96.1		P	80 - 120
Trifluralin	107		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A111715
Included Lab Sample IDs: 2321548, 2321550

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.0	99.8	P/P	90 - 110
Chloride	99.8	99.8	P/P	90 - 110
Sulfate	101	101	P/P	90 - 110
Sulfate	99.8	101	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A111744
Included Lab Sample IDs: 2321566, 2321567, 2321568, 2321569

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.9	99.1	P/P	90 - 110
Aluminum	98.2	97.9	P/P	90 - 110
Antimony	100	99.9	P/P	90 - 110
Antimony	99.9	100	P/P	90 - 110
Arsenic	97.3	97.4	P/P	90 - 110
Arsenic	97.8	97.3	P/P	90 - 110
Barium	98.7	98.9	P/P	90 - 110
Barium	98.9	98.5	P/P	90 - 110
Beryllium	94.3	93.8	P/P	90 - 110
Beryllium	94.5	94.3	P/P	90 - 110
Boron	98.4	97.8	P/P	90 - 110
Boron	99.4	98.4	P/P	90 - 110
Cadmium	98.3	98.7	P/P	90 - 110
Cadmium	98.4	98.3	P/P	90 - 110
Chromium	96.1	96.6	P/P	90 - 110
Chromium	96.6	96.1	P/P	90 - 110
Copper	96.6	97.5	P/P	90 - 110
Copper	97.2	96.6	P/P	90 - 110
Lead	95.4	96.0	P/P	90 - 110
Lead	96.0	95.4	P/P	90 - 110
Manganese	97.1	97.5	P/P	90 - 110
Manganese	98.5	97.1	P/P	90 - 110
Molybdenum	96.8	97.4	P/P	90 - 110
Molybdenum	97.3	96.8	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A111744
Included Lab Sample IDs: 2321566, 2321567, 2321568, 2321569

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Nickel	96.9	97.6	P/P	90 - 110
Nickel	97.5	96.9	P/P	90 - 110
Selenium	97.3	96.1	P/P	90 - 110
Selenium	97.4	97.3	P/P	90 - 110
Silver	97.5	97.7	P/P	90 - 110
Silver	97.7	97.5	P/P	90 - 110
Thallium	95.9	96.0	P/P	90 - 110
Thallium	96.0	95.3	P/P	90 - 110

Reference Method: EPA 8276
Run ID: A111748
Included Lab Sample IDs: 2321564

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	96.4		P	80 - 120
Toxaphene	97.3		P	80 - 120

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A111756
Included Lab Sample IDs: 2321549, 2321551

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	97.0	97.0	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A111772
Included Lab Sample IDs: 2321549, 2321551

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

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A111785
Included Lab Sample IDs: 2321566, 2321567, 2321568, 2321569

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cobalt	95.8	95.1	P/P	90 - 110
Cobalt	99.0	95.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A111801
Included Lab Sample IDs: 2321549, 2321551

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.3	98.9	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A111838
Included Lab Sample IDs: 2321561

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A111838
Included Lab Sample IDs: 2321561

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	109	102	P/P	60 - 150
Aldicarb	104	63.5	P/P	60 - 150
Aldicarb Sulfone	97.8	98.9	P/P	50 - 150
Aldicarb Sulfoxide	105	93.3	P/P	50 - 150
Carbaryl	103	112	P/P	60 - 150
Carbofuran	105	108	P/P	50 - 150
Methiocarb	105	97.4	P/P	50 - 150
Methomyl	98.5	96.0	P/P	50 - 150
Oxamyl	92.8	98.3	P/P	50 - 150
Propoxur	106	107	P/P	50 - 150

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A111853
Included Lab Sample IDs: 2321566, 2321567, 2321568, 2321569

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	100	101	P/P	90 - 110
Calcium	100	100	P/P	90 - 110
Iron	100	101	P/P	90 - 110
Iron	100	100	P/P	90 - 110
Magnesium	101	101	P/P	90 - 110
Magnesium	101	101	P/P	90 - 110
Potassium	98.4	99.1	P/P	90 - 110
Potassium	99.0	98.4	P/P	90 - 110
Sodium	98.3	99.8	P/P	90 - 110
Sodium	99.4	98.3	P/P	90 - 110
Strontium	100	96.4	P/P	90 - 110
Strontium	96.4	97.4	P/P	90 - 110
Tin	100	103	P/P	90 - 110
Tin	102	100	P/P	90 - 110
Titanium	101	101	P/P	90 - 110
Titanium	102	101	P/P	90 - 110
Vanadium	101	101	P/P	90 - 110
Vanadium	102	101	P/P	90 - 110
Zinc	101	101	P/P	90 - 110
Zinc	102	101	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A111863
Included Lab Sample IDs: 2321564

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	98.1		P	80 - 120
PCB-1260	101		P	80 - 120

Reference Method: EPA 8321B
Run ID: A111866
Included Lab Sample IDs: 2321562, 2321563

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	104	99.2	P/P	60 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A111866
Included Lab Sample IDs: 2321562, 2321563

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	96.2	95.6	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A111868
Included Lab Sample IDs: 2321562, 2321563

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	114	109	P/P	60 - 160
Endothall	95.9	91.3	P/P	60 - 160
Glufosinate	109	102	P/P	60 - 160
Glyphosate	95.6	94.5	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A111876
Included Lab Sample IDs: 2321562, 2321563

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	104	88.1	P/P	50 - 150
2,4,5-T	84.9	99.4	P/P	50 - 150
Acetaminophen	106	110	P/P	60 - 160
Acetamiprid	113	113	P/P	50 - 150
Afidopyropen	85.0	91.0	P/P	50 - 150
Bentazon	97.9	97.3	P/P	50 - 160
Benzovindiflupyr	111	112	P/P	50 - 150
Carbamazepine	103	109	P/P	60 - 150
Clothianidin	107	109	P/P	60 - 150
Dinotefuran	109	109	P/P	50 - 150
Diuron	108	108	P/P	60 - 160
Fenuron	105	107	P/P	60 - 150
Fluridone	106	108	P/P	60 - 160
Hydrocodone	107	109	P/P	60 - 150
Ibuprofen	114	95.7	P/P	50 - 160
Imazapyr	111	102	P/P	50 - 150
Imidacloprid	109	112	P/P	60 - 150
Linuron	99.6	109	P/P	60 - 150
Mandestrobin	109	108	P/P	50 - 150
MCPP	93.5	93.2	P/P	50 - 150
Naproxen	79.8	86.8	P/P	50 - 160
Primidone	100	99.9	P/P	60 - 150
Pyraclostrobin	105	105	P/P	60 - 150
Silvex	99.9	102	P/P	50 - 150
Thiamethoxam	112	115	P/P	50 - 150
Tolfenpyrad	98.1	99.3	P/P	60 - 150
Triclopyr	100	99.5	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A111924
Included Lab Sample IDs: 2321549, 2321551

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

Quality Assurance Report
Calibration Verification

Reference Method: SM 2320 B-2011
Run ID: A111984
Included Lab Sample IDs: 2321548, 2321550

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	94.9	95.0	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A111984
Included Lab Sample IDs: 2321548, 2321550

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	99.5	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A112007
Included Lab Sample IDs: 2321565

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Avobenzone	99.7		P	80 - 120
Octinoxate	93.5		P	80 - 120
Oxybenzone	104		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A112016
Included Lab Sample IDs: 2321549, 2321551

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.4	106	P/P	90 - 110
Kjeldahl Nitrogen	96.6	98.9	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A112025
Included Lab Sample IDs: 2321565

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	92.4		P	80 - 120
Alachlor	99.4		P	80 - 120
Ametryn	97.9		P	80 - 120
Atrazine	98.9		P	80 - 120
Atrazine Desethyl	111		P	80 - 120
Azinphos Methyl	96.8		P	80 - 120
Azoxystrobin	103		P	80 - 120
Bromacil	96.1		P	80 - 120
Butylate	103		P	80 - 120
Caffeine	107		P	80 - 120
Carbophenothion	89.8		P	80 - 120
Carfentrazone Ethyl	90.4		P	80 - 120
Chlorfenapyr	86.5		P	80 - 120
Chlorpyrifos Ethyl	93.3		P	80 - 120
Chlorpyrifos Methyl	85.2		P	80 - 120
Coumaphos	92.5		P	80 - 120
Cyanazine	91.1		P	80 - 120
Cyprodinil	96.8		P	80 - 120
Demeton	96.5		P	80 - 120
Diazinon	101		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A112025
Included Lab Sample IDs: 2321565

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Difenoconazole	85.2		P	80 - 120
Dimethenamid	91.5		P	80 - 120
Dimethomorph	95.5		P	80 - 120
Disulfoton	97.9		P	80 - 120
Dithiopyr	100		P	80 - 120
EPTC	97.7		P	80 - 120
Ethion	86.4		P	80 - 120
Ethoprop	98.9		P	80 - 120
Etridiazole	102		P	80 - 120
Fenamiphos	98.7		P	80 - 120
Fenbuconazole	98.0		P	80 - 120
Fipronil	101		P	80 - 120
Fipronil Desulfinyl	97.2		P	80 - 120
Fipronil Sulfide	116		P	80 - 120
Fipronil Sulfone	88.3		P	80 - 120
Fluazifop-P-butyl	100		P	80 - 120
Fludioxonil	90.5		P	80 - 120
Flumioxazin	109		P	80 - 120
Flutolanil	102		P	80 - 120
Fluxapyroxad	91.4		P	80 - 120
Fonofos	109		P	80 - 120
Hexazinone	100		P	80 - 120
Imazalil	88.9		P	80 - 120
Iprodione	93.4		P	80 - 120
Loratadine	112		P	80 - 120
Malathion	90.0		P	80 - 120
Metalaxyl	94.7		P	80 - 120
Metolachlor	102		P	80 - 120
Metribuzin	103		P	80 - 120
Mevinphos	98.2		P	80 - 120
Molinate	106		P	80 - 120
Myclobutanil	106		P	80 - 120
Naled	97.6		P	80 - 120
Napropamide	97.3		P	80 - 120
Norflurazon	93.8		P	80 - 120
Oxadiazon	98.8		P	80 - 120
Oxyfluorfen	90.1		P	80 - 120
Parathion Ethyl	105		P	80 - 120
Parathion Methyl	98.6		P	80 - 120
Pendimethalin	104		P	80 - 120
Phenytoin	93.9		P	80 - 120
Phorate	101		P	80 - 120
Prodiamine	90.1		P	80 - 120
Prometon	91.1		P	80 - 120
Prometryn	98.7		P	80 - 120
Pronamide	103		P	80 - 120
Propanil	103		P	80 - 120
Propargite	99.4		P	80 - 120
Propiconazole	88.1		P	80 - 120
Pyraflufen Ethyl	98.1		P	80 - 120
Pyridaben	94.4		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A112025
Included Lab Sample IDs: 2321565

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyriproxyfen	105		P	80 - 120
Simazine	88.9		P	80 - 120
Stirophos	88.4		P	80 - 120
Sulfentrazone	91.3		P	80 - 120
Tebuconazole	98.9		P	80 - 120
Terbufos	95.9		P	80 - 120
Terbuthylazine	103		P	80 - 120
Thiobencarb	109		P	80 - 120
Triadimefon	98.2		P	80 - 120

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

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision		
						LCS	SMP	MS
DEP SOP: NU-094-1	Color (true)	98.2					0.774	
EPA 180.1 Rev. 2.0	Turbidity	95.8					1.81	
EPA 200.7 Rev. 4.4	Calcium	107	110	108	109			1.15
	Iron	106	111	108	110			2.48
	Magnesium	108	112	109	112			2.20
	Potassium	102	109	105	101			3.39
	Sodium	100	104	104	104			0.0828
	Strontium	95.3	102	102	100			0.417
	Tin	102	102	103	103			0.891
	Titanium	102	104	104	103			0.0766
	Vanadium	96.2	97.8	98.1	98.6			0.269
	Zinc	100	102	102	105			0.772
EPA 200.8 Rev. 5.4	Aluminum	100	108	106	102			1.96
	Antimony	102	98.1	97.9	101			2.80
	Arsenic	98.9	95.8	98.1	95.3			2.40
	Barium	104	102	105	99.8			2.49
	Beryllium	92.7	94.6	95.3	92.7			0.692
	Boron	102	102	104	103			1.58
	Cadmium	100	96.7	99.5	96.2			2.89
	Chromium	98.0	98.0	98.8	96.9			0.819
	Cobalt	98.2	96.9	98.9	94.2			2.02
	Copper	97.0	95.9	97.1	94.4			1.22
	Lead	98.3	98.1	100	96.8			2.33
	Manganese	98.7	97.9	100				1.86
	Molybdenum	99.1	97.3	100	97.2			3.13
	Nickel	99.4	97.3	98.8	96.3			1.46
	Selenium	97.6	95.6	97.6	92.2			2.09
	Silver	97.1	93.8	96.2	93.7			2.58
	Thallium	101	101	103	99.2			2.61
EPA 300.0 Rev. 2.1	Chloride	99.1	98.0	97.6			0.248	
	Sulfate	98.0	97.2	97.4				
EPA 350.1 Rev. 2.0	Ammonia-N	96.6	99.6	97.6				1.70
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	106	106				0.178
	Kjeldahl Nitrogen	102	101	110				5.45
EPA 353.2 Rev. 2.0	NO2NO3-N	98.0	93.5					0.190
EPA 365.1 Rev. 2.0	Total-P	101	104	103				0.683
EPA 8270E	Acetochlor	117	98.4	92.8				5.91
	Alachlor	100	88.9	81.6				8.54
	Aldrin	59.1	56.0	49.9				11.5
	Alpha-BHC	95.2	91.8	92.3				0.621
	Alpha-Chlordane	68.4	69.5	67.2				3.38
	Ametryn	137	66.7	63.8				4.42
	Atrazine	116						11.4
	Atrazine Desethyl	97.6	62.7	63.2				0.699
	Avobenzone	96.6	125	113				9.58
	Azinphos Methyl	111	107	95.0				12.0
	Azoxystrobin	112	120	118				1.48
	Beta-BHC	103	100	136				30.7
	Beta-Cyfluthrin	79.3	92.1	78.8				15.5
	Bifenthrin	49.6	49.2	47.3				3.95
	Bromacil	110	81.3	86.3				5.88
	Butylate	63.3	59.5	54.7				8.45
	Caffeine	93.3	87.6	81.2				7.50
	Carbophenothion	118	90.2	82.7				8.75

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8270E	Carfentrazone Ethyl	126	93.1	80.8			14.2
	Chlorfenapyr	97.2	83.2	76.9			7.86
	Chlorothalonil	145	164	118			32.6
	Chlorpyrifos Ethyl	99.3	95.8	88.3			8.06
	Chlorpyrifos Methyl	93.5	102	91.0			11.0
	Cis-Nonachlor	62.0	50.4	48.7			3.48
	Coumaphos	111	85.0	81.9			3.67
	Cyanazine	95.0	77.5	67.4			13.9
	Cypermethrin	59.6	61.7	59.1			4.35
	Cyprodinil	112	96.7	81.2			17.4
	Dacthal	97.5	95.2	90.0			5.65
	DDD-p,p'	68.2	53.5	58.8			9.54
	DDE-p,p'	81.4	73.7	73.1			0.762
	DDT-p,p'	69.8	58.6	62.0			5.61
	Delta-BHC	112	114	143			22.4
	Deltamethrin	82.8	110	92.5			17.7
	Demeton	71.0	88.0	81.0			8.22
	Diazinon	107	98.1	90.0			8.58
	Dichlobenil	86.0	69.1	85.4			21.1
	Dicofol	69.3	59.9	61.6			2.80
	Dieldrin	61.9	56.0	58.4			4.25
	Difenoconazole	127	103	104			1.61
	Dimethenamid	106	85.7	74.8			13.5
	Dimethomorph	104	134	128			4.08
	Disulfoton	97.3	83.7	82.7			1.19
	Dithiopyr	112	101	91.2			10.0
	Endosulfan I	78.2	81.7	78.1			4.56
	Endosulfan II	93.0	87.3	79.7			9.07
	Endosulfan Sulfate	97.2	83.5	77.5			7.40
	Endrin	97.3	81.8	75.8			7.66
	Endrin Aldehyde	76.0	56.0	64.7			14.5
	Endrin Ketone	80.2	78.0	73.2			6.39
	EPTC	53.8	39.3	36.7			6.75
	Esfenvalerate	88.1	105	91.7			13.3
	Ethalfluralin	75.9	57.8	69.2			18.0
	Ethion	113	61.8	55.9			10.0
	Ethoprop	106	91.3	85.7			6.28
	Etridiazole	47.9	61.1	52.5			15.2
	Fenamiphos	117	72.1	76.0			5.22
	Fenbuconazole	115	88.9	75.9			15.7
	Fenpropathrin	60.5	52.8	58.2			9.70
	Fipronil	113	96.5	84.4			13.4
	Fipronil Desulfinyl	117	95.3	88.1			7.87
	Fipronil Sulfide	130	97.2	84.7			13.7
	Fipronil Sulfone	109	92.4	82.5			10.1
	Fluazifop-P-butyl	120	108	95.7			12.5
	Fludioxonil	118	96.1	83.9			13.6
	Flumioxazin	123	133	128			4.25
	Flutolanil	120	73.6	69.3			5.74
	Fluxapyroxad	118	82.0	69.8			16.1
	Fonofos	97.6	98.9	90.3			9.14
	Gamma-BHC	92.2	108	106			1.70
	Gamma-Chlordane	70.4	71.9	73.4			2.01
	Heptachlor	55.5	43.6	44.4			1.98

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8270E	Heptachlor Epoxide	64.1	54.0	57.1			5.67
	Hexachlorobenzene	97.2	51.8	74.7			36.2
	Hexazinone	120	96.7	89.0			8.38
	Imazalil	89.0	252	213			16.9
	Iprodione	123	84.8	79.6			6.27
	Kepone	74.2	81.8	78.3			4.37
	Lambda-Cyhalothrin	51.4	60.0	52.6			13.2
	Loratadine	111	119	121			1.50
	Malathion	112	87.1	85.3			2.09
	Metalaxyl	107	95.5	82.7			14.4
	Methoprene	69.8	78.0	66.6			15.8
	Methoxychlor	79.9	67.1	75.1			11.2
	Metolachlor	107	89.6	79.5			11.9
	Metribuzin	97.6	81.5	77.7			4.84
	Mevinphos	99.6	93.7	89.3			4.81
	MGK-264	88.3	91.4	78.9			14.8
	Mirex	50.4	50.3	48.2			4.30
	Molinate	82.1	69.1	68.3			1.19
	Myclobutanil	109	82.1	79.3			3.48
	Naled	76.4	101	90.0			11.9
	Napropamide	118	83.3	75.2			10.3
	Norflurazon	111	75.5	70.6			6.64
	Octinoxate	99.1	118	100			12.9
	Oxadiazon	97.7	60.5	53.4			8.64
	Oxybenzone	82.7	89.1	82.2			8.04
	Oxychlordane	78.4	68.8	70.2			2.02
	Oxyfluorfen	112	109	98.7			9.69
	Parathion Ethyl	106	97.0	81.1			17.9
	Parathion Methyl	114	100	93.1			7.26
	PCB-1016	78.3	78.9	72.4			8.58
	PCB-1260	82.1	85.3	69.1			21.0
	Pendimethalin	77.6	102	87.4			15.6
	Permethrin	59.2	66.7	63.3			5.31
	Phenothrin	53.1	70.8	85.0			18.3
	Phenytoin	83.5	43.1	32.7			27.4
	Phorate	72.6	95.2	83.5			13.1
	Piperonyl Butoxide	70.3	71.5	69.4			2.99
	Prallethrin	71.3	74.3	70.0			6.08
	Prodiamine	84.9	54.8	51.5			6.29
	Prometon	87.4	75.9	69.6			8.69
	Prometryn	107	84.0	73.7			13.1
	Pronamide	107	97.1	86.2			11.9
	Propanil	141	116	109			6.70
	Propargite	101	43.6	41.3			5.34
	Propiconazole	117	82.7	70.3			16.2
	Pyraflufen Ethyl	104	71.9	65.3			9.74
	Pyridaben	107	86.7	77.4			11.3
	Pyriproxyfen	103	75.3	65.4			14.1
	Simazine	95.5	85.5	78.4			8.75
	Stirophos	110	61.8	55.7			10.4
	Sulfentrazone	117	92.6	71.3			15.3
	Tau-Fluvalinate	68.1	87.8	83.7			4.86
	Tebuconazole	105	38.3	34.2			11.3
	Terbufos	95.4	110	104			5.41

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8270E	Terbuthylazine	108	94.6	87.7			7.60
	Tetramethrin	70.9	74.9	76.4			1.96
	Thiobencarb	94.3	79.1	72.5			8.78
	Trans-Nonachlor	83.4	74.9	74.9			0.0876
	Triadimefon	106	104	103			1.26
	Triclosan Methyl	72.0	74.9	76.8			2.55
	Trifluralin	69.5	61.8	58.3			5.84
EPA 8276	Chlordane	85.6	102	80.8			23.3
	Toxaphene	87.9	113	95.4			17.1
EPA 8321B	2,4-D	68.2	56.7	54.2			3.97
	2,4,5-T	71.8	73.4	72.9			0.644
	3-Hydroxycarbofuran	57.2	62.0	82.7			28.6
	Acesulfame K	99.2	95.6	96.3			0.663
	Acetaminophen	83.8	116	109			5.98
	Acetamiprid	59.2	30.5	23.6			25.7
	Afidopyropen	40.9	60.3	43.2			32.9
	Aldicarb	44.9	47.6	74.9			44.5
	Aldicarb Sulfone	85.9	119	111			6.65
	Aldicarb Sulfoxide	91.5	53.3	50.8			4.82
	AMPA	110	106	102			4.34
	Bentazon	65.7					0.652
	Benzovindiflupyr	71.0	46.4	46.2			0.547
	Carbamazepine	58.7	46.7	45.9			1.68
	Carbaryl	82.6	85.6	82.9			3.25
	Carbofuran	84.8	93.2	90.1			3.36
	Clothianidin	79.2	57.7	57.2			0.790
	Dinotefuran	98.2	93.5	92.2			1.43
	Diuron	70.9	37.5	36.7			2.23
	Endothall	96.3	96.2	95.1			1.10
	Fenuron	81.3	45.9	46.3			0.728
	Fluridone	68.5	45.6	45.2			0.640
	Glufosinate	109	112	93.5			18.3
	Glyphosate	98.2	83.0	79.7			4.13
	Hydrocodone	91.3	42.9	43.1			0.664
	Ibuprofen	60.6	54.4	47.8			12.9
	Imazapyr	81.2					0.285
	Imidacloprid	67.6	43.2	44.2			2.41
	Linuron	56.7	44.7	43.8			1.93
	Mandestrobin	60.2	49.5	50.6			2.21
	MCPP	82.6	91.3	86.3			5.70
	Methiocarb	79.9	85.3	82.5			3.32
	Methomyl	85.7	99.3	95.3			4.08
	Naproxen	40.2	42.1	43.9			4.02
	Oxamyl	86.5	108	112			3.77
	Primidone	83.1	54.6	53.5			2.04
	Propoxur	80.7	92.1	79.6			14.5
	Pyraclostrobin	65.1	62.9	62.7			0.253
	Silvex	82.1	83.3	80.6			3.38
	Sucralose	94.0	97.2	95.8			1.43
	Thiamethoxam	78.4	40.9	42.0			2.76
	Tolfenpyrad	40.5	36.0	33.7			6.67
	Triclopyr	77.9	75.6	71.1			6.10
SM 2320 B-2011	Total Alkalinity	98.3				3.13	
SM 2540 C-2011	TDS					1.08	

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
SM 4500-F- C-2011	Fluoride	99.8	98.7	98.0			0.492
SM 5310 B-2011	Organic Carbon	95.6	99.1	101			1.50

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2321548, 2321550
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2321548, 2321550
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2321566, 2321567, 2321568, 2321569
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2321566, 2321567, 2321568, 2321569
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2321548, 2321550
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2321548, 2321550
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2321549, 2321551
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2321549, 2321551
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2321549, 2321551
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2321549, 2321551
EPA 8270E	Analysis of Sunscreen Compounds in Water by GC/MS-SIM	2321565
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2321564
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2321565
EPA 8270E	PCBs in water matrices by GC/MS/MS	2321564
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2321564
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2321561
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2321562, 2321563
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2321548, 2321550
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2321566, 2321567, 2321568, 2321569
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2321548, 2321550
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2321548, 2321550
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2321548, 2321550
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2321549, 2321551

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	04/22/2022			04/22/2022 14:38	Samantha L Bates	2321548
	04/22/2022			04/22/2022 14:39	Samantha L Bates	2321550
EPA 180.1 Rev. 2.0	04/22/2022			04/22/2022 13:52	Anna M. Plaviak	2321548
	04/22/2022			04/22/2022 13:55	Anna M. Plaviak	2321550
EPA 200.7 Rev. 4.4	04/22/2022	04/26/2022 10:35	Megan Whitefoot	05/02/2022 20:16	McKinley C Carter	2321566
	04/22/2022	04/26/2022 10:35	Megan Whitefoot	05/02/2022 20:22	McKinley C Carter	2321569
	04/22/2022	04/26/2022 10:35	Megan Whitefoot	05/02/2022 21:09	McKinley C Carter	2321567
	04/22/2022	04/26/2022 10:35	Megan Whitefoot	05/02/2022 21:13	McKinley C Carter	2321568
EPA 200.8 Rev. 5.4	04/22/2022	04/26/2022 10:35	Megan Whitefoot	04/27/2022 21:23	Alexander Thompson	2321569
	04/22/2022	04/26/2022 10:35	Megan Whitefoot	04/27/2022 22:45	Alexander Thompson	2321566
	04/22/2022	04/26/2022 10:35	Megan Whitefoot	04/27/2022 22:54	Alexander Thompson	2321567
	04/22/2022	04/26/2022 10:35	Megan Whitefoot	04/27/2022 23:04	Alexander Thompson	2321568
	04/22/2022	04/26/2022 10:35	Megan Whitefoot	04/28/2022 15:52	Alexander Thompson	2321566
	04/22/2022	04/26/2022 10:35	Megan Whitefoot	04/28/2022 15:58	Alexander Thompson	2321567
	04/22/2022	04/26/2022 10:35	Megan Whitefoot	04/28/2022 16:05	Alexander Thompson	2321568
	04/22/2022	04/26/2022 10:35	Megan Whitefoot	04/28/2022 16:49	Alexander Thompson	2321569
EPA 300.0 Rev. 2.1	04/22/2022			04/29/2022 17:05	James L Waggerby	2321550
	04/22/2022			04/29/2022 19:42	James L Waggerby	2321548
EPA 350.1 Rev. 2.0	04/22/2022			04/29/2022 09:31	Judith K. Clark	2321549
	04/22/2022			04/29/2022 09:33	Judith K. Clark	2321551
EPA 351.2 Rev. 2.0	04/22/2022	05/04/2022 16:20	Alexandra J Mattheus	05/09/2022 13:37	Samantha L Bates	2321551
	04/22/2022	05/04/2022 16:20	Alexandra J Mattheus	05/09/2022 14:06	Samantha L Bates	2321549
EPA 353.2 Rev. 2.0	04/22/2022			04/28/2022 10:19	Beverly Y. Sanders	2321549
	04/22/2022			04/28/2022 10:26	Beverly Y. Sanders	2321551
EPA 365.1 Rev. 2.0	04/22/2022	04/29/2022 13:00	Simonne.V. Calhoun	05/03/2022 14:38	James L Waggerby	2321549
	04/22/2022	04/29/2022 13:00	Simonne.V. Calhoun	05/03/2022 14:39	James L Waggerby	2321551
EPA 8270E	04/22/2022	04/25/2022 08:00	Fe-Val Siddell	04/26/2022 21:57	Vandana T. Nagar	2321564
	04/22/2022	04/25/2022 08:00	Fe-Val Siddell	05/03/2022 04:53	Julie Wi	2321564
	04/22/2022	04/28/2022 08:00	Rasheda Ghaffari	05/03/2022 18:22	Vandana T. Nagar	2321565
	04/22/2022	04/28/2022 08:00	Rasheda Ghaffari	05/04/2022 18:55	Lipi Saha	2321565
EPA 8276	04/22/2022	04/25/2022 08:00	Fe-Val Siddell	04/27/2022 16:01	Arthur Maknenko	2321564
EPA 8321B	04/22/2022	04/25/2022 10:00	June Rhew	04/26/2022 03:34	Juyoung Kim	2321561
	04/22/2022	04/27/2022 09:00	Hoor Shaik	04/28/2022 13:23	Juyoung Kim	2321562
	04/22/2022	04/27/2022 09:00	Hoor Shaik	04/28/2022 13:41	Juyoung Kim	2321563
	04/22/2022	04/27/2022 11:00	Manjita Shrestha	04/27/2022 15:09	Manjita Shrestha	2321562
	04/22/2022	04/27/2022 11:00	Manjita Shrestha	04/27/2022 15:22	Manjita Shrestha	2321563
	04/22/2022	04/27/2022 11:00	Manjita Shrestha	04/28/2022 07:35	Manjita Shrestha	2321562
	04/22/2022	04/27/2022 11:00	Manjita Shrestha	04/28/2022 07:50	Manjita Shrestha	2321563
SM 2320 B-2011	04/22/2022			05/03/2022 02:28	Dale L. Simmons	2321548
	04/22/2022			05/03/2022 02:38	Dale L. Simmons	2321550

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2340 B-2011	04/22/2022			05/02/2022 20:16	McKinley C Carter	2321566
	04/22/2022			05/02/2022 20:22	McKinley C Carter	2321569
	04/22/2022			05/02/2022 21:09	McKinley C Carter	2321567
	04/22/2022			05/02/2022 21:13	McKinley C Carter	2321568
SM 2540 C-2011	04/22/2022			04/26/2022 15:06	Yijie Li	2321548, 2321550
SM 2540 D-2011	04/22/2022			04/26/2022 15:06	Yijie Li	2321548, 2321550
SM 4500-F- C-2011	04/22/2022			05/03/2022 02:28	Dale L. Simmons	2321548
	04/22/2022			05/03/2022 02:38	Dale L. Simmons	2321550
SM 5310 B-2011	04/22/2022			04/28/2022 05:38	Khloe J Berg	2321549
	04/22/2022			04/28/2022 05:51	Khloe J Berg	2321551