

Chemical Analysis Report

NW-DIST-2023-01-20-01

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

Event Description: **NW Run**
Request ID: **RQ-2023-01-16-11**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 W Government Street
Suite 208
Pensacola, FL 32502-5794
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Certified by: Colin Wright, Program Administrator

Date Certified: 07-FEB-2023 09:01

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

Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: Big Escambia Creek Downstream of Fannie Rd. Collection Date/Time: 01/19/2023 11:00

Field ID: G4NW0421

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2382011	DEP SOP: NU-094-1	Color (true)	26	A	PCU	P424807	
	EPA 180.1 Rev. 2.0	Turbidity	5.8		NTU	P424817	
	EPA 300.0 Rev. 2.1	Chloride	5.8		mg Cl/L	P425015	
		Sulfate	1.3		mg SO4/L	P425018	
	SM 2320 B-2011	Total Alkalinity	2.7		mg CaCO3/L	P425140	
	SM 2540 C-2015	TDS	26		mg/L	P425210	
	SM 2540 D-2015	TSS	6	I	mg/L	P425038	
	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P425150	
2382012	EPA 350.1 Rev. 2.0	Ammonia-N	0.014		mg N/L	P425359	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.20	I	mg N/L	P424998	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.52		mg N/L	P425089	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P424979	
	SM 5310 B-2011	Organic Carbon	2.9		mg C/L	P425084	
2382025	EPA 8321B	Aldicarb	0.020	U	ug/L	P424945	
		Aldicarb Sulfone	0.0020	U	ug/L	P424945	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P424945	
		Carbaryl	0.0020	U	ug/L	P424945	
		Carbofuran	0.0020	U	ug/L	P424945	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P424945	
		Methiocarb	0.0020	U	ug/L	P424945	
		Methomyl	0.0020	U	ug/L	P424945	
		Oxamyl	0.0020	U	ug/L	P424945	
		Propoxur	0.0020	U	ug/L	P424945	
2382026		2,4-D	0.0020	U	ug/L	P424846	
		Acesulfame K	0.10	U	ug/L	P424718	
		2,4,5-T	0.0040	U	ug/L	P424846	
		AMPA	0.10	U	ug/L	P424718	
		Acetaminophen	0.0080	U	ug/L	P424846	
		Acetamiprid	0.0020	U	ug/L	P424846	
		Endothall	0.25	U	ug/L	P424718	
		Glufosinate	0.10	U	ug/L	P424718	
		Glyphosate	0.10	U	ug/L	P424718	
		Afidopyropen	0.0020	U	ug/L	P424846	
		Bentazon	8.0E-04	U	ug/L	P424846	
		Sucralose	0.092		ug/L	P424718	
		Benzovindiflupyr	0.0020	U	ug/L	P424846	
		Carbamazepine	8.0E-04	U	ug/L	P424846	
		Clothianidin	0.0020	U	ug/L	P424846	
		Dinotefuran	0.0020	U	ug/L	P424846	
		Diuron	0.0020	U	ug/L	P424846	
		Fenuron	0.032	U	ug/L	P424846	
		Fluridone	8.0E-04	U	ug/L	P424846	
		Imazapyr	0.016	I	ug/L	P424846	
		Hydrocodone	0.0020	U	ug/L	P424846	

Field ID: G4NW0421

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2382026	EPA 8321B	Ibuprofen	0.080	U	ug/L	P424846	
		Imidacloprid	0.0028	I	ug/L	P424846	MS
		Linuron	0.0040	U	ug/L	P424846	
		Mandestrobin	0.0020	U	ug/L	P424846	
		MCP	0.0020	U	ug/L	P424846	
		Naproxen	0.0080	U	ug/L	P424846	
		Primidone	0.0040	U	ug/L	P424846	
		Pyraclostrobin	0.0020	U	ug/L	P424846	
		Silvex	0.0040	U	ug/L	P424846	
		Thiamethoxam	0.0020	U	ug/L	P424846	
		Tolfenpyrad	0.0020	U	ug/L	P424846	
		Triclopyr	0.0040	U	ug/L	P424846	
2382027	EPA 8270E	Aldrin	0.73	U	ng/L	P424717	
		Alpha-BHC	0.11	U	ng/L	P424717	
		Alpha-Chlordane	0.22	U	ng/L	P424717	
		PCB-1016	2.2	UQ	ng/L	P425033	
		Beta-BHC	0.11	U	ng/L	P424717	
		PCB-1221	2.2	UQ	ng/L	P425033	
		Beta-Cyfluthrin	1.4	U	ng/L	P424717	
		PCB-1232	2.2	UQ	ng/L	P425033	
		Bifenthrin	0.56	U	ng/L	P424717	
		PCB-1242	2.2	UQ	ng/L	P425033	
		PCB-1248	2.2	UQ	ng/L	P425033	
		Chlorothalonil	4.0	U	ng/L	P424717	
		PCB-1254	2.2	UQ	ng/L	P425033	
		Cis-Nonachlor	0.22	U	ng/L	P424717	
		PCB-1260	2.2	UQ	ng/L	P425033	
		Cypermethrin	1.7	U	ng/L	P424717	
		Dacthal	0.17	U	ng/L	P424717	
		DDD-p,p'	0.28	U	ng/L	P424717	
		DDE-p,p'	0.22	U	ng/L	P424717	
		DDT-p,p'	0.28	U	ng/L	P424717	
		Delta-BHC	0.45	U	ng/L	P424717	
		Deltamethrin	1.4	U	ng/L	P424717	
		Dichlobenil	0.28	U	ng/L	P424717	
		Dicofol	1.4	U	ng/L	P424717	
		Dieldrin	0.45	U	ng/L	P424717	
		Endosulfan I	0.45	U	ng/L	P424717	
		Endosulfan II	0.45	U	ng/L	P424717	
		Endosulfan Sulfate	0.33	U	ng/L	P424717	
		Endrin	0.45	U	ng/L	P424717	
		Endrin Aldehyde	0.84	UJ	ng/L	P424717	LCS
		Endrin Ketone	0.45	U	ng/L	P424717	RPD
		Esfenvalerate	0.84	U	ng/L	P424717	
		Ethalfuralin	0.17	U	ng/L	P424717	

Field ID: G4NW0421

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2382027	EPA 8270E	Fenpropathrin	0.28	U	ng/L	P424717	
		Gamma-BHC	0.14	U	ng/L	P424717	
		Gamma-Chlordane	0.22	U	ng/L	P424717	
		Heptachlor	0.22	U	ng/L	P424717	
		Heptachlor Epoxide	0.28	U	ng/L	P424717	
		Hexachlorobenzene**	1.1	U	ng/L	P424717	
		Kepone	5.6	U	ng/L	P424717	
		Lambda-Cyhalothrin	0.84	U	ng/L	P424717	
		Methoprene	0.84	U	ng/L	P424717	
		Methoxychlor	0.33	U	ng/L	P424717	
		MGK-264	0.22	U	ng/L	P424717	
		Mirex	0.39	U	ng/L	P424717	
		Oxychlordane	0.33	U	ng/L	P424717	
		Permethrin	1.8	U	ng/L	P424717	
		Phenothrin	1.0	U	ng/L	P424717	
		Piperonyl Butoxide	0.17	U	ng/L	P424717	
		Prallethrin	2.2	U	ng/L	P424717	
		Tau-Fluvalinate	0.28	U	ng/L	P424717	
		Tetramethrin	0.84	U	ng/L	P424717	
		Trans-Nonachlor	0.22	U	ng/L	P424717	
		Triclosan Methyl	0.17	U	ng/L	P424717	
		Trifluralin	0.22	U	ng/L	P424717	
		Chlordane	2.2	U	ng/L	P424717	
		Toxaphene	17	U	ng/L	P424717	
2382028	EPA 8270E	Oxybenzone**	10	U	ng/L	P424772	
		Acetochlor	0.26	U	ng/L	P424772	
		Octinoxate**	21	U	ng/L	P424772	
		Alachlor	0.26	U	ng/L	P424772	
		Avobenzone**	100	U	ng/L	P424772	
		Ametryn	0.63	U	ng/L	P424772	
		Atrazine	1.4		ng/L	P424772	
		PBDE-47**	4.2	U	ng/L	P424772	
		Atrazine Desethyl	1.6	U	ng/L	P424772	
		PBDE-99**	5.2	U	ng/L	P424772	
		Azinphos Methyl	2.1	U	ng/L	P424772	
		Tri-o-cresyl Phosphate**	6.3	U	ng/L	P424772	
		Azoxystrobin	0.52	U	ng/L	P424772	
		Bromacil	0.52	U	ng/L	P424772	
		2-Ethylhexyl	13	U	ng/L	P424772	
		2,3,4,5-tetrabromobenzoate (EHTBB)**					
		Butylate	0.42	U	ng/L	P424772	
		Dechlorane Plus**	31	U	ng/L	P424772	
		Caffeine**	13	I	ng/L	P424772	
		Carbophenothion	0.21	U	ng/L	P424772	
		Carfentrazone Ethyl	0.10	U	ng/L	P424772	

Field ID: G4NW0421

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2382028	EPA 8270E	Chlorfenapyr	0.18	U	ng/L	P424772	
		Chlorpyrifos Ethyl	0.26	U	ng/L	P424772	
		Chlorpyrifos Methyl	0.052	U	ng/L	P424772	
		Coumaphos	0.52	UJ	ng/L	P424772	CCV
		Cyanazine	3.4	U	ng/L	P424772	
		Cyprodinil	0.10	U	ng/L	P424772	
		Demeton	1.6	U	ng/L	P424772	
		Diazinon	0.13	U	ng/L	P424772	
		Difenoconazole	0.63	UJ	ng/L	P424772	RPD
		Dimethenamid	0.10	U	ng/L	P424772	
		Dimethomorph	0.18	U	ng/L	P424772	
		Disulfoton	0.52	U	ng/L	P424772	
		Dithiopyr	0.66	U	ng/L	P424772	
		EPTC	1.3	UJ	ng/L	P424772	RPD
		Ethion	0.16	U	ng/L	P424772	
		Ethoprop	0.10	U	ng/L	P424772	
		Etridiazole	0.16	UJ	ng/L	P424772	RPD
		Fenamiphos	0.52	U	ng/L	P424772	
		Fenbuconazole	0.13	U	ng/L	P424772	
		Fipronil	0.26	U	ng/L	P424772	
		Fipronil Desulfinyl**	0.13	U	ng/L	P424772	
		Fipronil Sulfide	0.16	U	ng/L	P424772	
		Fipronil Sulfone	0.16	U	ng/L	P424772	
		Fluazifop-P-butyl	0.10	U	ng/L	P424772	
		Fludioxonil	0.13	U	ng/L	P424772	
		Flumioxazin	4.7	U	ng/L	P424772	
		Flutolanil	0.13	I	ng/L	P424772	
		Fluxapyroxad	0.20	IJ	ng/L	P424772	CCV
		Fonofos	0.21	U	ng/L	P424772	
		Hexazinone	0.96	I	ng/L	P424772	
		Imazalil	0.79	U	ng/L	P424772	
		Iprodione	0.63	UJ	ng/L	P424772	CCV
		Loratadine**	0.37	U	ng/L	P424772	
		Malathion	0.37	U	ng/L	P424772	
		Metalaxyl	0.79	U	ng/L	P424772	
		Metolachlor	2.5		ng/L	P424772	
		Metribuzin	1.6	U	ng/L	P424772	
		Mevinphos	1.1	U	ng/L	P424772	
		Molinate	0.31	U	ng/L	P424772	
		Myclobutanil	0.26	U	ng/L	P424772	
		Naled	1.6	U	ng/L	P424772	
		Napropamide	0.42	U	ng/L	P424772	
		Norflurazon	0.60	I	ng/L	P424772	
		Oxadiazon	0.31	U	ng/L	P424772	
		Oxyfluorfen	0.16	U	ng/L	P424772	

Field ID: G4NW0421

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2382028	EPA 8270E	Parathion Ethyl	0.26	U	ng/L	P424772	
		Parathion Methyl	0.58	U	ng/L	P424772	
		Pendimethalin	1.0	U	ng/L	P424772	
		Phenytion**	3.7	U	ng/L	P424772	
		Phorate	0.55	U	ng/L	P424772	
		Prodiamine	0.18	U	ng/L	P424772	
		Prometon	0.94	U	ng/L	P424772	
		Prometryn	0.21	U	ng/L	P424772	
		Pronamide	0.16	U	ng/L	P424772	
		Propanil	0.13	U	ng/L	P424772	
		Propargite	1.6	U	ng/L	P424772	
		Propiconazole	0.52	U	ng/L	P424772	
		Pyraflufen Ethyl	0.26	U	ng/L	P424772	
		Pyridaben	0.47	U	ng/L	P424772	
		Pyriproxyfen	0.13	U	ng/L	P424772	
		Simazine	0.52	U	ng/L	P424772	
		Stirophos	0.13	U	ng/L	P424772	
		Sulfentrazone	0.52	U	ng/L	P424772	
		Tebuconazole	0.52	U	ng/L	P424772	
		Terbufos	0.10	U	ng/L	P424772	
		Terbuthylazine	0.45	U	ng/L	P424772	
		Thiobencarb	0.63	U	ng/L	P424772	
		Triadimefon	0.26	U	ng/L	P424772	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

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

EPA 8270E: Insufficient sample available to perform duplicate matrix spikes. Sample expired for preparation due to need for re-extraction.

Sample Location: Wiggins Branch Below Highway 29

Collection Date/Time: 01/19/2023 11:55

Field ID: G4NW0163

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2382013	DEP SOP: NU-094-1	Color (true)	25		PCU	P424807	
	EPA 180.1 Rev. 2.0	Turbidity	3.4		NTU	P424817	
	EPA 300.0 Rev. 2.1	Chloride	3.7		mg Cl/L	P425015	
		Sulfate	1.4		mg SO4/L	P425018	
	SM 2320 B-2011	Total Alkalinity	3.2		mg CaCO3/L	P425184	
	SM 2540 C-2015	TDS	22	I	mg/L	P425210	
	SM 2540 D-2015	TSS	5	I	mg/L	P425038	
2382015	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P425188	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.046		mg N/L	P425359	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.30		mg N/L	P424998	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.025		mg N/L	P425089	
	EPA 365.1 Rev. 2.0	Total-P	0.01		mg P/L	P424979	
2382029	SM 5310 B-2011	Organic Carbon	4.9		mg C/L	P425085	
	EPA 200.7 Rev. 4.4	Calcium	1.76		mg/L	P424892	
		Chromium	1.0	U	ug/L	P424892	
		Iron	900		ug/L	P424892	
		Magnesium	0.80		mg/L	P424892	
		Potassium	0.31	I	mg/L	P424892	
		Sodium	1.9	I	mg/L	P424892	
		Strontium	5.6	I	ug/L	P424892	
		Tin	3.0	U	ug/L	P424892	
		Titanium	0.87	I	ug/L	P424892	
		Vanadium	2.0	U	ug/L	P424892	
		Zinc	5.0	U	ug/L	P424892	
	EPA 200.8 Rev. 5.4	Aluminum	107		ug/L	P424892	
		Antimony	0.050	U	ug/L	P424892	
		Arsenic	0.38		ug/L	P424892	
		Barium	11.5		ug/L	P424892	
		Beryllium	0.036	I	ug/L	P424892	
		Boron	9.7		ug/L	P424892	
		Cadmium	0.020	U	ug/L	P424892	
		Cobalt	0.323		ug/L	P424892	
		Copper	0.40	U	ug/L	P424892	
		Lead	0.20	U	ug/L	P424892	
		Manganese	25.2		ug/L	P424892	
	SM 2340 B-2011	Molybdenum	0.15	U	ug/L	P424892	
		Nickel	0.50	U	ug/L	P424892	
		Selenium	0.20	U	ug/L	P424892	
		Silver	0.010	U	ug/L	P424892	
		Thallium	0.10	U	ug/L	P424892	
		Hardness	7.7		mg/L	P424892	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Little Pine Barren Creek Above CR99

Collection Date/Time: 01/19/2023 12:35

Field ID: G4NW0420

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2382014	DEP SOP: NU-094-1	Color (true)	19		PCU	P424807	
	EPA 180.1 Rev. 2.0	Turbidity	2.4		NTU	P424817	
	EPA 300.0 Rev. 2.1	Chloride	6.8		mg Cl/L	P425015	
		Sulfate	0.64		mg SO4/L	P425018	
	SM 2320 B-2011	Total Alkalinity	3.5		mg CaCO3/L	P425184	
	SM 2540 C-2015	TDS	28		mg/L	P425210	
	SM 2540 D-2015	TSS	2	U	mg/L	P425038	
	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P425188	
2382016	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P425359	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.17	I	mg N/L	P424998	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.1		mg N/L	P425089	
	EPA 365.1 Rev. 2.0	Total-P	0.009		mg P/L	P424979	
	SM 5310 B-2011	Organic Carbon	1.5		mg C/L	P425085	
2382030	EPA 200.7 Rev. 4.4	Calcium	1.95		mg/L	P424892	
		Chromium	1.0	U	ug/L	P424892	
		Iron	990		ug/L	P424892	
		Magnesium	1.89		mg/L	P424892	
		Potassium	1.1	I	mg/L	P424892	
		Sodium	2.7		mg/L	P424892	
		Strontium	19.6		ug/L	P424892	
		Tin	3.0	U	ug/L	P424892	
		Titanium	0.75	U	ug/L	P424892	
		Vanadium	2.0	U	ug/L	P424892	
		Zinc	5.0	U	ug/L	P424892	
	EPA 200.8 Rev. 5.4	Aluminum	39		ug/L	P424892	
		Antimony	0.050	U	ug/L	P424892	
		Arsenic	0.25		ug/L	P424892	
		Barium	67.5		ug/L	P424892	
		Beryllium	0.032	I	ug/L	P424892	
		Boron	9.7		ug/L	P424892	
		Cadmium	0.020	U	ug/L	P424892	
		Cobalt	0.383		ug/L	P424892	
		Copper	0.40	U	ug/L	P424892	
		Lead	0.20	U	ug/L	P424892	
		Manganese	41.9		ug/L	P424892	
		Molybdenum	0.15	U	ug/L	P424892	
		Nickel	0.50	U	ug/L	P424892	
		Selenium	0.20	U	ug/L	P424892	
		Silver	0.010	U	ug/L	P424892	
		Thallium	0.10	U	ug/L	P424892	
		Hardness	12.6		mg/L	P424892	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Brushy Creek Upstream of Arthur Brown Rd. Collection Date/Time: 01/19/2023 13:10

Field ID: G5NW0002

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2382031	EPA 200.7 Rev. 4.4	Calcium	2.02		mg/L	P424892	
		Chromium	1.0	U	ug/L	P424892	
		Iron	440		ug/L	P424892	
		Magnesium	1.01		mg/L	P424892	
		Potassium	0.76	I	mg/L	P424892	
		Sodium	3.2		mg/L	P424892	
		Strontium	12.0		ug/L	P424892	
		Tin	3.0	U	ug/L	P424892	
		Titanium	1.1	I	ug/L	P424892	
		Vanadium	2.0	U	ug/L	P424892	
		Zinc	5.0	U	ug/L	P424892	
	EPA 200.8 Rev. 5.4	Aluminum	100		ug/L	P424892	
		Antimony	0.050	U	ug/L	P424892	
		Arsenic	0.25		ug/L	P424892	
		Barium	28.5		ug/L	P424892	
		Beryllium	0.032	I	ug/L	P424892	
		Boron	12.0		ug/L	P424892	
		Cadmium	0.020	U	ug/L	P424892	
		Cobalt	0.353		ug/L	P424892	
		Copper	0.40	U	ug/L	P424892	
		Lead	0.21	I	ug/L	P424892	
		Manganese	24.2		ug/L	P424892	
		Molybdenum	0.15	U	ug/L	P424892	
		Nickel	0.50	U	ug/L	P424892	
		Selenium	0.20	U	ug/L	P424892	
		Silver	0.010	U	ug/L	P424892	
		Thallium	0.10	U	ug/L	P424892	
	SM 2340 B-2011	Hardness	9.2		mg/L	P424892	

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P424807

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P424817

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P424892

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Chromium	1.0	U	ug/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: P424892

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
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: P425015

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: P425018

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425359

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424998

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425089

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424979

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

Reference Method: EPA 8270E
Batch ID: P424717

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	3.6	U	ng/L
Chlorothalonil	3.6	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P424717

Component	Result	Code	Units
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
Ethalfuralin	0.15	U	ng/L
Ethalfuralin	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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P424717

Component	Result	Code	Units
Mirex	0.35	U	ng/L
Mirex	0.35	U	ng/L
Oxychlordane	0.30	U	ng/L
Oxychlordane	0.30	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: P424772

Component	Result	Code	Units
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	12	U	ng/L
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	12	U	ng/L
Acetochlor	0.25	U	ng/L
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine	0.25	U	ng/L
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P424772

Component	Result	Code	Units
Carbophenothion	0.20	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Chlorfenapyr	0.18	U	ng/L
Chlorfenapyr	0.18	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Coumaphos	0.50	U	ng/L
Coumaphos	0.50	U	ng/L
Cyanazine	3.2	U	ng/L
Cyanazine	3.2	U	ng/L
Cyprodinil	0.10	U	ng/L
Cyprodinil	0.10	U	ng/L
Dechlorane Plus	30	U	ng/L
Dechlorane Plus	30	U	ng/L
Demeton	1.5	U	ng/L
Demeton	1.5	U	ng/L
Diazinon	0.12	U	ng/L
Diazinon	0.12	U	ng/L
Difenoconazole	0.60	U	ng/L
Difenoconazole	0.60	U	ng/L
Dimethenamid	0.10	U	ng/L
Dimethenamid	0.10	U	ng/L
Dimethomorph	0.18	U	ng/L
Dimethomorph	0.18	U	ng/L
Disulfoton	0.50	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.62	U	ng/L
Dithiopyr	0.62	U	ng/L
EPTC	1.2	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Ethoprop	0.10	U	ng/L
Etridiazole	0.15	U	ng/L
Etridiazole	0.15	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P424772

Component	Result	Code	Units
Fluazifop-P-butyl	0.10	U	ng/L
Fludioxonil	0.12	U	ng/L
Fludioxonil	0.12	U	ng/L
Flumioxazin	4.5	U	ng/L
Flumioxazin	4.5	U	ng/L
Flutolanil	0.10	U	ng/L
Flutolanil	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fonofos	0.20	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Hexazinone	0.50	U	ng/L
Imazalil	0.75	U	ng/L
Imazalil	0.75	U	ng/L
Iprodione	0.60	U	ng/L
Iprodione	0.60	U	ng/L
Loratadine	0.35	U	ng/L
Loratadine	0.35	U	ng/L
Malathion	0.35	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.75	U	ng/L
Metalaxyl	0.75	U	ng/L
Metolachlor	0.35	U	ng/L
Metolachlor	0.35	U	ng/L
Metribuzin	1.5	U	ng/L
Metribuzin	1.5	U	ng/L
Mevinphos	1.0	U	ng/L
Mevinphos	1.0	U	ng/L
Molinate	0.30	U	ng/L
Molinate	0.30	U	ng/L
Myclobutanil	0.25	U	ng/L
Myclobutanil	0.25	U	ng/L
Naled	1.5	U	ng/L
Naled	1.5	U	ng/L
Napropamide	0.40	U	ng/L
Napropamide	0.40	U	ng/L
Norflurazon	0.50	U	ng/L
Norflurazon	0.50	U	ng/L
Octinoxate	20	U	ng/L
Octinoxate	20	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxybenzone	10	U	ng/L
Oxybenzone	10	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Parathion Methyl	0.55	U	ng/L
PBDE-47	4.0	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P424772

Component	Result	Code	Units
PBDE-47	4.0	U	ng/L
PBDE-99	5.0	U	ng/L
PBDE-99	5.0	U	ng/L
Pendimethalin	1.0	U	ng/L
Pendimethalin	1.0	U	ng/L
Phenytain	3.5	U	ng/L
Phenytain	3.5	U	ng/L
Phorate	0.52	U	ng/L
Phorate	0.52	U	ng/L
Prodiamine	0.18	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Prometryn	0.20	U	ng/L
Pronamide	0.15	U	ng/L
Pronamide	0.15	U	ng/L
Propanil	0.12	U	ng/L
Propanil	0.12	U	ng/L
Propargite	1.5	U	ng/L
Propargite	1.5	U	ng/L
Propiconazole	0.50	U	ng/L
Propiconazole	0.50	U	ng/L
Pyraflufen Ethyl	0.25	U	ng/L
Pyraflufen Ethyl	0.25	U	ng/L
Pyridaben	0.45	U	ng/L
Pyridaben	0.45	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Simazine	0.50	U	ng/L
Simazine	0.50	U	ng/L
Stirophos	0.12	U	ng/L
Stirophos	0.12	U	ng/L
Sulfentrazone	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L
Terbutylazine	0.42	U	ng/L
Thiobencarb	0.60	U	ng/L
Thiobencarb	0.60	U	ng/L
Tri-o-cresyl Phosphate	6.0	U	ng/L
Tri-o-cresyl Phosphate	6.0	U	ng/L
Triadimefon	0.25	U	ng/L
Triadimefon	0.25	U	ng/L

Reference Method: EPA 8270E

Batch ID: P425033

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P425033

Component	Result	Code	Units
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

Reference Method: EPA 8276

Batch ID: P424717

Component	Result	Code	Units
Chlordane	2.0	U	ng/L
Chlordane	2.0	U	ng/L
Toxaphene	15	U	ng/L
Toxaphene	15	U	ng/L

Reference Method: EPA 8321B

Batch ID: P424718

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: P424846

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.032	U	ug/L
Fluridone	8.0E-04	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P424846

Component	Result	Code	Units
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.080	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B

Batch ID: P424945

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: SM 2320 B-2011

Batch ID: P425140

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

Reference Method: SM 2320 B-2011

Batch ID: P425184

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

Reference Method: SM 2540 C-2015

Batch ID: P425210

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015

Batch ID: P425038

Component	Result	Code	Units
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Method Blank Results

Reference Method: SM 2540 D-2015
Batch ID: P425038

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P425150

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P425188

Component	Result	Code	Units
Fluoride	0.025	U	mg C/L

Reference Method: SM 5310 B-2011
Batch ID: P425084

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

Reference Method: SM 5310 B-2011
Batch ID: P425085

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: P424807

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P424817

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P424892

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	106		P	85 - 115
Chromium	100		P	85 - 115
Iron	104		P	85 - 115
Magnesium	105		P	85 - 115
Potassium	104		P	85 - 115
Sodium	104		P	85 - 115
Strontium	101		P	85 - 115
Tin	105		P	85 - 115
Titanium	102		P	85 - 115
Vanadium	100		P	85 - 115
Zinc	104		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P424892

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.0		P	85 - 115
Antimony	94.5		P	85 - 115
Arsenic	98.5		P	85 - 115
Barium	97.8		P	85 - 115
Beryllium	87.8		P	85 - 115
Boron	104		P	85 - 115
Cadmium	100		P	85 - 115
Cobalt	91.9		P	85 - 115
Copper	94.9		P	85 - 115
Lead	93.1		P	85 - 115
Manganese	97.0		P	85 - 115
Molybdenum	92.2		P	85 - 115
Nickel	95.0		P	85 - 115
Selenium	95.6		P	85 - 115
Silver	96.4		P	85 - 115
Thallium	96.4		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425015

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425018

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425359

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424998

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425089

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424979

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

Reference Method: EPA 8270E
Batch ID: P424717

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	54.5		P	10 - 92.0
Alpha-BHC	80.1		P	75 - 107
Alpha-Chlordane	78.1		P	50 - 108
Beta-BHC	88.8		P	36 - 138
Beta-Cyfluthrin	73.5		P	20 - 161
Bifenthrin	66.9		P	10 - 119
Chlorothalonil	87.1		P	26 - 186
Cis-Nonachlor	53.0		P	42 - 119
Cypermethrin	64.3		P	22 - 150
Dacthal	80.1		P	72 - 119
DDD-p,p'	75.9		P	45 - 107
DDE-p,p'	69.8		P	48 - 106
DDT-p,p'	65.9		P	48 - 110
Delta-BHC	102		P	54 - 140
Deltamethrin	103		P	22 - 189
Dichlobenil	65.2		P	36 - 117
Dicofol	54.4		P	46 - 155
Dieldrin	72.3		P	54 - 110
Endosulfan I	73.8		P	59 - 105
Endosulfan II	82.0		P	51 - 118
Endosulfan Sulfate	100		P	57 - 121
Endrin	75.8		P	10 - 120

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P424717

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Endrin Aldehyde	24.2		F	34 - 118
Endrin Ketone	148		P	69 - 177
Esfenvalerate	91.5		P	23 - 168
Ethalfuralin	65.9		P	49 - 99.0
Fenpropathrin	74.2		P	34 - 117
Gamma-BHC	79.3		P	72 - 117
Gamma-Chlordane	78.9		P	43 - 106
Heptachlor	65.9		P	41 - 98.0
Heptachlor Epoxide	72.7		P	57 - 106
Hexachlorobenzene	68.4		P	36 - 99.0
Kepone	153		P	16 - 215
Lambda-Cyhalothrin	63.5		P	21 - 177
Methoprene	63.6		P	10 - 119
Methoxychlor	84.7		P	60 - 112
MGK-264	77.3		P	26 - 122
Mirex	58.6		P	10 - 169
Oxychlordane	71.0		P	43 - 105
Permethrin	73.9		P	24 - 148
Phenothrin	56.7		P	10 - 106
Piperonyl Butoxide	138		P	10 - 139
Prallethrin	80.8		P	17 - 109
Tau-Fluvalinate	78.4		P	13 - 131
Tetramethrin	100		P	10 - 132
Trans-Nonachlor	68.5		P	44 - 106
Triclosan Methyl	88.2		P	59 - 109
Trifluralin	68.8		P	44 - 101

Reference Method: EPA 8270E

Batch ID: P424772

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	85.8		P	42 - 162
Acetochlor	115		P	69 - 123
Alachlor	109		P	65 - 118
Ametryn	102		P	58 - 141
Atrazine	102		P	73 - 118
Atrazine Desethyl	54.8		P	32 - 125
Avobenzone	117		P	40 - 203
Azinphos Methyl	194		P	36 - 197
Azoxystrobin	86.8		P	58 - 226
Bromacil	97.0		P	48 - 120
Butylate	58.0		P	27 - 85.0
Caffeine	89.8		P	40 - 137
Carbophenothion	66.5		P	54 - 132
Carfentrazone Ethyl	95.9		P	60 - 142
Chlorfenapyr	69.1		P	53 - 117
Chlorpyrifos Ethyl	112		P	59 - 116
Chlorpyrifos Methyl	118		P	66 - 119
Coumaphos	111		P	11 - 234
Cyanazine	149		P	61 - 248
Cyprodinil	98.3		P	50 - 147
Dechlorane Plus	104		P	47 - 182

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P424772

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Demeton	64.9		P	30 - 138
Diazinon	106		P	67 - 126
Difenoconazole	110		P	38 - 205
Dimethenamid	90.4		P	57 - 111
Dimethomorph	117		P	16 - 212
Disulfoton	71.9		P	46 - 126
Dithiopyr	90.5		P	62 - 115
EPTC	59.1		P	28 - 80.0
Ethion	95.8		P	24 - 122
Ethoprop	70.3		P	62 - 113
Etridiazole	41.6		P	28 - 92.0
Fenamiphos	112		P	57 - 128
Fenbuconazole	89.8		P	52 - 155
Fipronil	91.7		P	63 - 130
Fipronil Desulfinyl	62.9		P	61 - 130
Fipronil Sulfide	69.2		P	56 - 117
Fipronil Sulfone	70.8		P	52 - 118
Fluazifop-P-butyl	71.4		P	61 - 128
Fludioxonil	91.8		P	59 - 129
Flumioxazin	51.3		P	30 - 250
Flutolanil	117		P	53 - 127
Fluxapyroxad	67.2		P	42 - 132
Fonofos	106		P	61 - 110
Hexazinone	94.3		P	46 - 139
Imazalil	96.6		P	40 - 139
Iprodione	118		P	40 - 146
Loratadine	111		P	10 - 224
Malathion	124		P	61 - 135
Metaxyl	81.4		P	58 - 121
Metolachlor	101		P	64 - 118
Metribuzin	102		P	45 - 245
Mevinphos	88.3		P	49 - 118
Molinate	62.5		P	42 - 92.0
Myclobutanil	120		P	55 - 127
Naled	68.3		P	10 - 114
Napropamide	66.4		P	39 - 121
Norflurazon	95.5		P	55 - 129
Octinoxate	80.7		P	26 - 166
Oxadiazon	77.2		P	54 - 115
Oxybenzone	77.6		P	49 - 135
Oxyfluorfen	107		P	64 - 139
Parathion Ethyl	106		P	70 - 111
Parathion Methyl	132		P	76 - 136
PBDE-47	86.5		P	41 - 148
PBDE-99	88.3		P	38 - 147
Pendimethalin	92.9		P	52 - 118
Phenytol	48.6		P	10 - 162
Phorate	84.5		P	40 - 122
Prodiamine	59.5		P	26 - 141
Prometon	87.1		P	54 - 122
Prometryn	89.0		P	61 - 128
Pronamide	119		P	72 - 121

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P424772

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Propanil	107		P	45 - 144
Propargite	135		P	10 - 199
Propiconazole	99.3		P	56 - 127
Pyraflufen Ethyl	120		P	56 - 140
Pyridaben	117		P	26 - 211
Pyriproxyfen	69.9		P	33 - 194
Simazine	94.9		P	67 - 121
Stirophos	65.8		P	20 - 142
Sulfentrazone	53.2		P	21 - 144
Tebuconazole	79.6		P	10 - 122
Terbufos	70.2		P	60 - 129
Terbuthylazine	106		P	69 - 113
Thiobencarb	97.4		P	51 - 120
Tri-o-cresyl Phosphate	83.8		P	49 - 150
Triadimefon	105		P	56 - 114

Reference Method: EPA 8270E
Batch ID: P425033

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
PCB-1016	97.3	101	P/P	48 - 112
PCB-1260	109	117	P/P	44 - 118

Reference Method: EPA 8276
Batch ID: P424717

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	91.1		P	61 - 116
Toxaphene	99.3		P	48 - 124

Reference Method: EPA 8321B
Batch ID: P424718

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	97.0		P	40 - 150
AMPA	100		P	40 - 150
Endothall	93.2		P	40 - 150
Glufosinate	98.1		P	40 - 150
Glyphosate	99.5		P	40 - 150
Sucralose	91.7		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P424846

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	80.2		P	40 - 150
2,4,5-T	68.8		P	40 - 150
Acetaminophen	80.2		P	30 - 150
Acetamiprid	90.9		P	40 - 150
Afidopyropen	55.5		P	30 - 150
Bentazon	74.9		P	30 - 150
Benzovindiflupyr	81.4		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P424846

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Carbamazepine	68.5		P	40 - 150
Clothianidin	93.5		P	40 - 150
Dinotefuran	97.8		P	40 - 150
Diuron	67.5		P	40 - 150
Fenuron	91.5		P	40 - 150
Fluridone	75.0		P	40 - 150
Hydrocodone	108		P	40 - 150
Ibuprofen	86.6		P	40 - 150
Imazapyr	106		P	40 - 150
Imidacloprid	90.0		P	40 - 150
Linuron	71.3		P	40 - 150
Mandestrobin	80.1		P	40 - 150
MCPP	89.1		P	40 - 150
Naproxen	85.1		P	40 - 150
Primidone	111		P	40 - 150
Pyraclostrobin	59.8		P	40 - 150
Silvex	61.3		P	40 - 150
Thiamethoxam	94.9		P	40 - 150
Tolfenpyrad	42.7		P	30 - 150
Triclopyr	65.5		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P424945

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	106		P	40 - 150
Aldicarb	77.9		P	30 - 150
Aldicarb Sulfone	83.4		P	40 - 150
Aldicarb Sulfoxide	110		P	40 - 150
Carbaryl	69.1		P	40 - 150
Carbofuran	74.1		P	40 - 150
Methiocarb	65.3		P	40 - 150
Methomyl	95.3		P	40 - 150
Oxamyl	90.9		P	40 - 150
Propoxur	69.4		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P425140

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	95.9		P	94 - 106

Reference Method: SM 2320 B-2011

Batch ID: P425184

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.6		P	94 - 106

Reference Method: SM 2540 C-2015

Batch ID: P425210

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

Reference Method: SM 2540 C-2015
Batch ID: P425210

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

Reference Method: SM 2540 D-2015
Batch ID: P425038

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	94.8		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P425150

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	96 - 104

Reference Method: SM 4500-F- C-2011
Batch ID: P425188

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P425084

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.0		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P425085

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	104		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P424892

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382005	Calcium	104		P	80 - 120
2382005	Chromium	99.7	102	P/P	80 - 120
2382005	Iron	106	107	P/P	80 - 120
2382005	Magnesium	103	105	P/P	80 - 120
2382005	Potassium	101	103	P/P	80 - 120
2382005	Sodium	103		P	80 - 120
2382005	Strontium	101	102	P/P	80 - 120
2382005	Tin	104	105	P/P	80 - 120
2382005	Titanium	101	103	P/P	80 - 120
2382005	Vanadium	102	104	P/P	80 - 120
2382005	Zinc	98.5	101	P/P	80 - 120
2382030	Calcium	104		P	80 - 120
2382030	Chromium	100		P	80 - 120
2382030	Iron	105		P	80 - 120
2382030	Magnesium	106		P	80 - 120
2382030	Potassium	103		P	80 - 120
2382030	Sodium	104		P	80 - 120
2382030	Strontium	101		P	80 - 120
2382030	Tin	104		P	80 - 120
2382030	Titanium	102		P	80 - 120
2382030	Vanadium	100		P	80 - 120
2382030	Zinc	95.4		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P424892

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382005	Aluminum	96.8	100	P/P	80 - 120
2382005	Antimony	97.7	98.5	P/P	80 - 120
2382005	Arsenic	102	104	P/P	80 - 120
2382005	Barium	100	101	P/P	80 - 120
2382005	Beryllium	93.6	93.5	P/P	80 - 120
2382005	Boron	97.4	101	P/P	80 - 120
2382005	Cadmium	102	102	P/P	80 - 120
2382005	Cobalt	93.4	95.6	P/P	80 - 120
2382005	Copper	95.7	96.9	P/P	80 - 120
2382005	Lead	95.0	97.2	P/P	80 - 120
2382005	Manganese	94.8	97.5	P/P	80 - 120
2382005	Molybdenum	94.3	96.9	P/P	80 - 120
2382005	Nickel	98.0	99.0	P/P	80 - 120
2382005	Selenium	98.9	99.8	P/P	80 - 120
2382005	Silver	94.4	95.7	P/P	80 - 120
2382005	Thallium	99.4	101	P/P	80 - 120
2382030	Aluminum	102		P	80 - 120
2382030	Antimony	98.1		P	80 - 120
2382030	Arsenic	100		P	80 - 120
2382030	Barium	104		P	80 - 120
2382030	Beryllium	97.5		P	80 - 120
2382030	Boron	107		P	80 - 120
2382030	Cadmium	103		P	80 - 120
2382030	Cobalt	95.2		P	80 - 120
2382030	Copper	99.2		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P424892

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382030	Lead	96.3		P	80 - 120
2382030	Manganese	105		P	80 - 120
2382030	Molybdenum	95.1		P	80 - 120
2382030	Nickel	100		P	80 - 120
2382030	Selenium	97.7		P	80 - 120
2382030	Silver	98.5		P	80 - 120
2382030	Thallium	98.5		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425015

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2381946	Chloride	99.5		P	90 - 110
2381949	Chloride	99.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425018

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2381946	Sulfate	96.9		P	90 - 110
2381949	Sulfate	98.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425359

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2381999	Ammonia-N	97.8	99.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424998

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2381985	Kjeldahl Nitrogen	96.1	93.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425089

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2381999	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424979

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382000	Total-P	109	108	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P424717

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2381752	Aldrin	44.7	46.4	P/P	20 - 82.0
2381752	Alpha-BHC	79.4	84.9	P/P	71 - 109

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P424717

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2381752	Alpha-Chlordane	71.1	76.9	P/P	42 - 106
2381752	Beta-BHC	78.0	77.8	P/P	69 - 180
2381752	Beta-Cyfluthrin	85.4	90.6	P/P	18 - 175
2381752	Bifenthrin	79.9	73.1	P/P	21 - 128
2381752	Chlorothalonil	107	98.4	P/P	10 - 300
2381752	Cis-Nonachlor	51.3	46.1	P/P	34 - 106
2381752	Cypermethrin	69.0	72.2	P/P	22 - 158
2381752	Dacthal	72.9	74.6	P/P	54 - 116
2381752	DDD-p,p'	69.2	74.4	P/P	34 - 107
2381752	DDE-p,p'	64.1	66.8	P/P	33 - 110
2381752	DDT-p,p'	60.4	61.5	P/P	50 - 122
2381752	Delta-BHC	88.9	91.9	P/P	77 - 193
2381752	Deltamethrin	117	118	P/P	10 - 195
2381752	Dichlobenil	50.5	54.1	P/P	25 - 113
2381752	Dicofol	60.3	60.2	P/P	38 - 247
2381752	Dieldrin	67.7	69.9	P/P	45 - 118
2381752	Endosulfan I	60.9	62.2	P/P	51 - 106
2381752	Endosulfan II	70.8	74.0	P/P	37 - 122
2381752	Endosulfan Sulfate	97.3	90.1	P/P	43 - 132
2381752	Endrin	68.1	71.2	P/P	29 - 101
2381752	Endrin Aldehyde	51.0	45.7	P/P	19 - 110
2381752	Endrin Ketone	89.6	137	P/P	60 - 140
2381752	Esfenvalerate	117	118	P/P	26 - 199
2381752	Ethalfuralin	59.8	60.4	P/P	45 - 99.0
2381752	Fenpropathrin	68.6	76.5	P/P	35 - 120
2381752	Gamma-BHC	69.3	72.3	P/P	63 - 128
2381752	Gamma-Chlordane	75.0	75.6	P/P	40 - 104
2381752	Heptachlor	55.1	57.6	P/P	36 - 97.0
2381752	Heptachlor Epoxide	61.5	65.5	P/P	49 - 184
2381752	Hexachlorobenzene	59.7	61.4	P/P	39 - 96.0
2381752	Kepone	134	139	P/P	10 - 217
2381752	Lambda-Cyhalothrin	80.3	81.8	P/P	21 - 193
2381752	Methoprene	74.1	77.6	P/P	20 - 106
2381752	Methoxychlor	88.3	80.2	P/P	53 - 118
2381752	MGK-264	73.4	76.3	P/P	40 - 118
2381752	Mirex	50.9	54.3	P/P	26 - 92.0
2381752	Oxychlordane	60.0	65.2	P/P	44 - 99.0
2381752	Permethrin	68.4	72.5	P/P	33 - 182
2381752	Phenothrin	68.1	72.7	P/P	10 - 129
2381752	Piperonyl Butoxide	87.7	90.3	P/P	10 - 211
2381752	Prallethrin	88.2	88.0	P/P	24 - 113
2381752	Tau-Fluvalinate	107	111	P/P	14 - 149
2381752	Tetramethrin	107	103	P/P	17 - 151
2381752	Trans-Nonachlor	60.9	60.9	P/P	42 - 102
2381752	Triclosan Methyl	75.6	77.6	P/P	48 - 108
2381752	Trifluralin	61.8	60.1	P/P	47 - 96.0

Reference Method: EPA 8270E
Batch ID: P424772

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382028	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	61.6	74.1	P/P	26 - 165

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P424772

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382028	Acetochlor	100	110	P/P	67 - 124
2382028	Alachlor	109	101	P/P	60 - 120
2382028	Ametryn	117	97.4	P/P	54 - 216
2382028	Atrazine	98.1	105	P/P	66 - 128
2382028	Atrazine Desethyl	57.3	55.2	P/P	15 - 122
2382028	Avobenzone	79.2	85.8	P/P	37 - 178
2382028	Azinphos Methyl	200	188	P/P	40 - 292
2382028	Azoxystrobin	96.0	89.7	P/P	35 - 220
2382028	Bromacil	101	116	P/P	45 - 127
2382028	Butylate	55.0	43.6	P/P	20 - 83.0
2382028	Caffeine	85.8	85.1	P/P	10 - 194
2382028	Carbophenothion	59.5	75.3	P/P	57 - 127
2382028	Carfentrazone Ethyl	98.5	121	P/P	51 - 141
2382028	Chlorfenapyr	71.7	78.2	P/P	46 - 111
2382028	Chlorpyrifos Ethyl	110	118	P/P	52 - 120
2382028	Chlorpyrifos Methyl	106	118	P/P	63 - 119
2382028	Coumaphos	119	142	P/P	10 - 228
2382028	Cyanazine	149	171	P/P	59 - 241
2382028	Cyprodinil	99.0	108	P/P	47 - 146
2382028	Dechlorane Plus	72.4	84.4	P/P	50 - 150
2382028	Demeton	66.0	65.8	P/P	40 - 136
2382028	Diazinon	104	130	P/P	69 - 132
2382028	Difenoconazole	95.2	199	P/P	57 - 258
2382028	Dimethenamid	83.5	96.5	P/P	54 - 110
2382028	Dimethomorph	132	125	P/P	28 - 210
2382028	Disulfoton	71.7	75.1	P/P	43 - 133
2382028	Dithiopyr	93.7	103	P/P	39 - 116
2382028	EPTC	57.3	35.4	P/P	20 - 78.0
2382028	Ethion	80.6	116	P/P	17 - 119
2382028	Ethoprop	76.6	82.7	P/P	66 - 120
2382028	Etridiazole	45.5	31.8	P/P	28 - 96.0
2382028	Fenamiphos	113	107	P/P	41 - 126
2382028	Fenbuconazole	111	119	P/P	42 - 169
2382028	Fipronil	93.8	97.0	P/P	61 - 132
2382028	Fipronil Desulfinyl	72.2	75.0	P/P	56 - 132
2382028	Fipronil Sulfide	74.9	75.8	P/P	48 - 119
2382028	Fipronil Sulfone	69.5	72.6	P/P	42 - 131
2382028	Fluazifop-P-butyl	67.2	79.5	P/P	53 - 131
2382028	Fludioxonil	91.1	106	P/P	56 - 127
2382028	Flumioxazin	47.5	65.5	P/P	19 - 300
2382028	Flutolanil	111	102	P/P	41 - 127
2382028	Fluxapyroxad	77.8	77.0	P/P	42 - 172
2382028	Fonofos	97.1	108	P/P	59 - 113
2382028	Hexazinone	89.8	98.3	P/P	66 - 122
2382028	Imazalil	71.3	87.3	P/P	21 - 283
2382028	Iprodione	124	136	P/P	43 - 150
2382028	Loratadine	120	127	P/P	23 - 201
2382028	Malathion	125	132	P/P	58 - 136
2382028	Metalaxyl	95.4	89.2	P/P	55 - 120
2382028	Metolachlor	90.6	93.0	P/P	57 - 121
2382028	Metribuzin	100	114	P/P	58 - 294
2382028	Mevinphos	101	104	P/P	50 - 126

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P424772

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382028	Molinate	60.7	56.1	P/P	42 - 93.0
2382028	Myclobutanil	118	124	P/P	55 - 125
2382028	Naled	84.8	79.8	P/P	18 - 200
2382028	Napropamide	55.6	60.7	P/P	39 - 110
2382028	Norflurazon	90.0	105	P/P	48 - 128
2382028	Octinoxate	59.1	63.8	P/P	21 - 159
2382028	Oxadiazon	73.7	83.6	P/P	43 - 112
2382028	Oxybenzone	62.0	67.3	P/P	41 - 142
2382028	Oxyfluorfen	112	114	P/P	64 - 153
2382028	Parathion Ethyl	95.7	100	P/P	69 - 114
2382028	Parathion Methyl	134	139	P/P	79 - 139
2382028	PBDE-47	61.2	68.0	P/P	27 - 144
2382028	PBDE-99	61.3	71.1	P/P	18 - 150
2382028	Pendimethalin	105	96.4	P/P	50 - 139
2382028	Phenytoin	43.3	60.4	P/P	10 - 146
2382028	Phorate	86.7	95.6	P/P	54 - 161
2382028	Prodiamine	61.3	74.1	P/P	30 - 161
2382028	Prometon	104	91.0	P/P	45 - 134
2382028	Prometryn	109	98.5	P/P	45 - 137
2382028	Pronamide	121	122	P/P	65 - 133
2382028	Propanil	103	116	P/P	49 - 142
2382028	Propargite	116	119	P/P	10 - 203
2382028	Propiconazole	99.6	106	P/P	38 - 146
2382028	Pyraflufen Ethyl	116	118	P/P	34 - 153
2382028	Pyridaben	169	162	P/P	12 - 192
2382028	Pyriproxyfen	73.2	75.5	P/P	33 - 180
2382028	Simazine	100	104	P/P	51 - 157
2382028	Stirophos	85.5	91.4	P/P	10 - 128
2382028	Sulfentrazone	77.5	86.2	P/P	53 - 186
2382028	Tebuconazole	73.5	87.2	P/P	10 - 133
2382028	Terbufos	75.9	74.6	P/P	65 - 139
2382028	Terbuthylazine	104	103	P/P	66 - 117
2382028	Thiobencarb	98.3	99.9	P/P	51 - 119
2382028	Tri-o-cresyl Phosphate	60.4	66.8	P/P	31 - 144
2382028	Triadimefon	91.2	99.4	P/P	48 - 119

Reference Method: EPA 8270E

Batch ID: P425033

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382133	PCB-1016	87.5		P	46 - 111
2382133	PCB-1260	98.7		P	45 - 114

Reference Method: EPA 8276

Batch ID: P424717

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2381365	Chlordane	91.9	93.2	P/P	53 - 126
2381365	Toxaphene	112	112	P/P	56 - 211

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P424718

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382026	Acesulfame K	97.9	98.3	P/P	40 - 150
2382026	AMPA	115	106	P/P	40 - 150
2382026	Endothall	95.0	93.9	P/P	40 - 150
2382026	Glufosinate	92.0	94.8	P/P	40 - 150
2382026	Glyphosate	106	84.5	P/P	40 - 150
2382026	Sucralose	90.7	93.1	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P424846

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2381541	2,4-D	95.4	83.9	P/P	40 - 150
2381541	2,4,5-T	94.8	103	P/P	40 - 150
2381541	Acetaminophen	89.6	98.5	P/P	30 - 150
2381541	Acetamiprid	99.4	93.1	P/P	40 - 150
2381541	Afidopyropen	78.8	76.7	P/P	30 - 150
2381541	Benzovindiflupyr	72.3	83.6	P/P	40 - 150
2381541	Carbamazepine	56.8	56.9	P/P	40 - 150
2381541	Clothianidin	105	109	P/P	40 - 150
2381541	Dinotefuran	120	126	P/P	40 - 150
2381541	Diuron	42.3	49.7	P/P	40 - 150
2381541	Fenuron	69.7	74.8	P/P	40 - 150
2381541	Fluridone	68.9	73.0	P/P	40 - 150
2381541	Hydrocodone	106	107	P/P	40 - 150
2381541	Ibuprofen	56.8	72.3	P/P	40 - 150
2381541	Imidacloprid	158	168	F/F	40 - 150
2381541	Linuron	81.9	94.5	P/P	40 - 150
2381541	Mandestrobin	78.6	81.9	P/P	40 - 150
2381541	MCPP	102	108	P/P	40 - 150
2381541	Naproxen	96.3	82.9	P/P	40 - 150
2381541	Primidone	119	123	P/P	40 - 150
2381541	Pyraclostrobin	76.0	76.9	P/P	40 - 150
2381541	Silvex	74.5	86.3	P/P	40 - 150
2381541	Thiamethoxam	110	112	P/P	40 - 150
2381541	Tolfenpyrad	55.2	56.1	P/P	30 - 150
2381541	Triclopyr	96.9	95.1	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P424945

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382025	3-Hydroxycarbofuran	88.7	80.4	P/P	40 - 150
2382025	Aldicarb	74.5	58.4	P/P	30 - 150
2382025	Aldicarb Sulfone	84.6	81.7	P/P	40 - 150
2382025	Aldicarb Sulfoxide	57.6	57.6	P/P	40 - 150
2382025	Carbaryl	57.3	56.2	P/P	40 - 150
2382025	Carbofuran	58.9	52.8	P/P	40 - 150
2382025	Methiocarb	62.2	64.7	P/P	40 - 150
2382025	Methomyl	87.7	80.3	P/P	40 - 150
2382025	Oxamyl	85.2	85.6	P/P	40 - 150
2382025	Propoxur	54.2	53.7	P/P	40 - 150

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P425150

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382200	Fluoride	104	101	P/P	94 - 104

Reference Method: SM 4500-F- C-2011
Batch ID: P425188

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382077	Fluoride	101	100	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P425084

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2381999	Organic Carbon	89.0	99.4	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P425085

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382116	Organic Carbon	102	104	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P424807

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382011	Color (true)	1.30	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P424817

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2381946	Turbidity	0.0	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P424892

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382005	Calcium	0.181	Spike	P	0 - 20
2382005	Chromium	1.98	Spike	P	0 - 20
2382005	Iron	0.602	Spike	P	0 - 20
2382005	Magnesium	0.592	Spike	P	0 - 20
2382005	Potassium	1.34	Spike	P	0 - 20
2382005	Sodium	1.50	Spike	P	0 - 20
2382005	Strontium	1.16	Spike	P	0 - 20
2382005	Tin	0.882	Spike	P	0 - 20
2382005	Titanium	1.86	Spike	P	0 - 20
2382005	Vanadium	2.32	Spike	P	0 - 20
2382005	Zinc	2.72	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P424892

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382005	Aluminum	3.16	Spike	P	0 - 20
2382005	Antimony	0.826	Spike	P	0 - 20
2382005	Arsenic	1.36	Spike	P	0 - 20
2382005	Barium	0.954	Spike	P	0 - 20
2382005	Beryllium	0.104	Spike	P	0 - 20
2382005	Boron	2.73	Spike	P	0 - 20
2382005	Cadmium	0.743	Spike	P	0 - 20
2382005	Cobalt	2.34	Spike	P	0 - 20
2382005	Copper	1.15	Spike	P	0 - 20
2382005	Lead	2.24	Spike	P	0 - 20
2382005	Manganese	1.69	Spike	P	0 - 20
2382005	Molybdenum	2.01	Spike	P	0 - 20
2382005	Nickel	0.974	Spike	P	0 - 20
2382005	Selenium	0.986	Spike	P	0 - 20
2382005	Silver	1.33	Spike	P	0 - 20
2382005	Thallium	2.03	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425015

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2381946	Chloride	0.357	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425018

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2381946	Sulfate	0.679	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425359

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2381999	Ammonia-N	1.15	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424998

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2381985	Kjeldahl Nitrogen	2.17	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425089

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2381999	NO2NO3-N	0.499	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424979

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382000	Total-P	0.464	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P424717

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2381752	Aldrin	3.66	Spike	P	0 - 41
2381752	Alpha-BHC	6.76	Spike	P	0 - 25
2381752	Alpha-Chlordane	7.86	Spike	P	0 - 33
2381752	Beta-BHC	0.281	Spike	P	0 - 36
2381752	Beta-Cyfluthrin	5.85	Spike	P	0 - 42
2381752	Bifenthrin	8.87	Spike	P	0 - 53
2381752	Chlorothalonil	8.35	Spike	P	0 - 71
2381752	Cis-Nonachlor	10.5	Spike	P	0 - 29
2381752	Cypermethrin	4.60	Spike	P	0 - 40

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P424717

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2381752	Dacthal	2.23	Spike	P	0 - 26
2381752	DDD-p,p'	7.28	Spike	P	0 - 39
2381752	DDE-p,p'	4.07	Spike	P	0 - 33
2381752	DDT-p,p'	1.76	Spike	P	0 - 40
2381752	Delta-BHC	3.27	Spike	P	0 - 37
2381752	Deltamethrin	1.54	Spike	P	0 - 100
2381752	Dichlobenil	6.82	Spike	P	0 - 40
2381752	Dicofol	0.124	Spike	P	0 - 31
2381752	Dieldrin	3.03	Spike	P	0 - 27
2381752	Endosulfan I	2.12	Spike	P	0 - 23
2381752	Endosulfan II	4.41	Spike	P	0 - 28
2381752	Endosulfan Sulfate	7.71	Spike	P	0 - 38
2381752	Endrin	4.50	Spike	P	0 - 63
2381752	Endrin Aldehyde	11.0	Spike	P	0 - 60
2381752	Endrin Ketone	42.0	Spike	F	0 - 37
2381752	Esfenvalerate	1.02	Spike	P	0 - 52
2381752	Ethalfuralin	0.967	Spike	P	0 - 23
2381752	Fenpropathrin	10.9	Spike	P	0 - 32
2381752	Gamma-BHC	4.27	Spike	P	0 - 17
2381752	Gamma-Chlordane	0.810	Spike	P	0 - 40
2381752	Heptachlor	4.43	Spike	P	0 - 29
2381752	Heptachlor Epoxide	6.29	Spike	P	0 - 25
2381752	Hexachlorobenzene	2.70	Spike	P	0 - 36
2381752	Kepone	3.92	Spike	P	0 - 93
2381752	Lambda-Cyhalothrin	1.77	Spike	P	0 - 55
2381752	Methoprene	4.72	Spike	P	0 - 53
2381752	Methoxychlor	9.63	Spike	P	0 - 29
2381752	MGK-264	3.92	Spike	P	0 - 35
2381752	Mirex	6.47	Spike	P	0 - 46
2381752	Oxychlordane	8.38	Spike	P	0 - 29
2381752	Permethrin	5.82	Spike	P	0 - 44
2381752	Phenothrin	6.46	Spike	P	0 - 56
2381752	Piperonyl Butoxide	2.93	Spike	P	0 - 100
2381752	Prallethrin	0.159	Spike	P	0 - 42
2381752	Tau-Fluvalinate	4.13	Spike	P	0 - 54
2381752	Tetramethrin	4.12	Spike	P	0 - 51
2381752	Trans-Nonachlor	0.0590	Spike	P	0 - 37
2381752	Triclosan Methyl	2.55	Spike	P	0 - 31
2381752	Trifluralin	2.69	Spike	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P424772

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382028	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	18.4	Spike	P	0 - 37
2382028	Acetochlor	8.94	Spike	P	0 - 28
2382028	Alachlor	7.90	Spike	P	0 - 30
2382028	Ametryn	18.1	Spike	P	0 - 32
2382028	Atrazine	5.31	Spike	P	0 - 41
2382028	Atrazine Desethyl	3.68	Spike	P	0 - 36

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P424772

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382028	Avobenzone	7.94	Spike	P	0 - 36
2382028	Azinphos Methyl	6.34	Spike	P	0 - 75
2382028	Azoxystrobin	6.73	Spike	P	0 - 39
2382028	Bromacil	13.7	Spike	P	0 - 33
2382028	Butylate	23.3	Spike	P	0 - 44
2382028	Caffeine	0.824	Spike	P	0 - 74
2382028	Carbophenothion	23.5	Spike	P	0 - 25
2382028	Carfentrazone Ethyl	20.7	Spike	P	0 - 27
2382028	Chlorfenapyr	8.69	Spike	P	0 - 24
2382028	Chlorpyrifos Ethyl	6.89	Spike	P	0 - 26
2382028	Chlorpyrifos Methyl	9.99	Spike	P	0 - 26
2382028	Coumaphos	17.8	Spike	P	0 - 28
2382028	Cyanazine	14.1	Spike	P	0 - 48
2382028	Cyprodinil	8.50	Spike	P	0 - 29
2382028	Dechlorane Plus	15.3	Spike	P	0 - 30
2382028	Demeton	0.268	Spike	P	0 - 33
2382028	Diazinon	22.6	Spike	P	0 - 29
2382028	Difenoconazole	70.4	Spike	F	0 - 34
2382028	Dimethenamid	14.4	Spike	P	0 - 39
2382028	Dimethomorph	4.79	Spike	P	0 - 51
2382028	Disulfoton	4.57	Spike	P	0 - 30
2382028	Dithiopyr	9.45	Spike	P	0 - 26
2382028	EPTC	47.2	Spike	F	0 - 43
2382028	Ethion	36.2	Spike	P	0 - 79
2382028	Ethoprop	7.63	Spike	P	0 - 29
2382028	Etridiazole	35.6	Spike	F	0 - 33
2382028	Fenamiphos	5.98	Spike	P	0 - 40
2382028	Fenbuconazole	7.29	Spike	P	0 - 74
2382028	Fipronil	3.30	Spike	P	0 - 29
2382028	Fipronil Desulfinyl	3.70	Spike	P	0 - 32
2382028	Fipronil Sulfide	1.20	Spike	P	0 - 30
2382028	Fipronil Sulfone	4.29	Spike	P	0 - 33
2382028	Fluazifop-P-butyl	16.8	Spike	P	0 - 38
2382028	Fludioxonil	15.3	Spike	P	0 - 29
2382028	Flumioxazin	31.7	Spike	P	0 - 51
2382028	Flutolanil	8.52	Spike	P	0 - 25
2382028	Fluxapyroxad	0.924	Spike	P	0 - 45
2382028	Fonofos	10.8	Spike	P	0 - 27
2382028	Hexazinone	8.38	Spike	P	0 - 30
2382028	Imazalil	20.2	Spike	P	0 - 100
2382028	Iprodione	9.10	Spike	P	0 - 33
2382028	Loratadine	5.14	Spike	P	0 - 56
2382028	Malathion	5.82	Spike	P	0 - 37
2382028	Metalaxyl	6.73	Spike	P	0 - 40
2382028	Metolachlor	2.17	Spike	P	0 - 29
2382028	Metribuzin	12.7	Spike	P	0 - 45
2382028	Mevinphos	2.68	Spike	P	0 - 29
2382028	Molinate	7.87	Spike	P	0 - 33
2382028	Myclobutanil	4.87	Spike	P	0 - 26
2382028	Naled	6.02	Spike	P	0 - 37
2382028	Napropamide	8.80	Spike	P	0 - 44

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P424772

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382028	Norflurazon	14.4	Spike	P	0 - 30
2382028	Octinoxate	7.68	Spike	P	0 - 45
2382028	Oxadiazon	12.7	Spike	P	0 - 28
2382028	Oxybenzone	8.18	Spike	P	0 - 46
2382028	Oxyfluorfen	1.67	Spike	P	0 - 28
2382028	Parathion Ethyl	4.85	Spike	P	0 - 31
2382028	Parathion Methyl	3.87	Spike	P	0 - 29
2382028	PBDE-47	10.4	Spike	P	0 - 36
2382028	PBDE-99	14.8	Spike	P	0 - 40
2382028	Pendimethalin	8.57	Spike	P	0 - 33
2382028	Phenytoin	33.1	Spike	P	0 - 100
2382028	Phorate	9.80	Spike	P	0 - 36
2382028	Prodiamine	18.9	Spike	P	0 - 71
2382028	Prometon	13.1	Spike	P	0 - 36
2382028	Prometryn	9.89	Spike	P	0 - 28
2382028	Pronamide	0.466	Spike	P	0 - 24
2382028	Propanil	11.2	Spike	P	0 - 28
2382028	Propargite	3.00	Spike	P	0 - 43
2382028	Propiconazole	5.88	Spike	P	0 - 33
2382028	Pyraflufen Ethyl	1.49	Spike	P	0 - 29
2382028	Pyridaben	4.57	Spike	P	0 - 30
2382028	Pyriproxyfen	3.08	Spike	P	0 - 79
2382028	Simazine	3.81	Spike	P	0 - 29
2382028	Stiropfos	6.60	Spike	P	0 - 61
2382028	Sulfentrazone	10.6	Spike	P	0 - 33
2382028	Tebuconazole	17.0	Spike	P	0 - 69
2382028	Terbufos	1.79	Spike	P	0 - 29
2382028	Terbuthylazine	0.524	Spike	P	0 - 32
2382028	Thiobencarb	1.68	Spike	P	0 - 26
2382028	Tri-o-cresyl Phosphate	10.1	Spike	P	0 - 33
2382028	Triadimefon	8.50	Spike	P	0 - 28

Reference Method: EPA 8270E
Batch ID: P425033

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	PCB-1016	3.97	LCS	P	0 - 24
LFB	PCB-1260	7.10	LCS	P	0 - 29

Reference Method: EPA 8276
Batch ID: P424717

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2381365	Chlordane	1.33	Spike	P	0 - 25
2381365	Toxaphene	0.245	Spike	P	0 - 26

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P424718

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382026	Acesulfame K	0.448	Spike	P	0 - 30
2382026	AMPA	8.17	Spike	P	0 - 30
2382026	Endothall	1.18	Spike	P	0 - 30
2382026	Glufosinate	3.03	Spike	P	0 - 30
2382026	Glyphosate	22.4	Spike	P	0 - 30
2382026	Sucralose	2.52	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P424846

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2381541	2,4-D	11.9	Spike	P	0 - 30
2381541	2,4,5-T	8.74	Spike	P	0 - 30
2381541	Acetaminophen	9.43	Spike	P	0 - 30
2381541	Acetamiprid	6.55	Spike	P	0 - 30
2381541	Afidopyropen	2.74	Spike	P	0 - 30
2381541	Bentazon	10.6	Spike	P	0 - 30
2381541	Benzovindiflupyr	14.5	Spike	P	0 - 30
2381541	Carbamazepine	0.138	Spike	P	0 - 30
2381541	Clothianidin	4.13	Spike	P	0 - 30
2381541	Dinotefuran	5.30	Spike	P	0 - 30
2381541	Diuron	9.24	Spike	P	0 - 30
2381541	Fenuron	7.16	Spike	P	0 - 30
2381541	Fluridone	3.18	Spike	P	0 - 30
2381541	Hydrocodone	1.59	Spike	P	0 - 30
2381541	Ibuprofen	24.1	Spike	P	0 - 30
2381541	Imazapyr	9.40	Spike	P	0 - 30
2381541	Imidacloprid	5.78	Spike	P	0 - 30
2381541	Linuron	14.3	Spike	P	0 - 30
2381541	Mandestrobin	4.13	Spike	P	0 - 30
2381541	MCPP	6.01	Spike	P	0 - 30
2381541	Naproxen	14.9	Spike	P	0 - 30
2381541	Primidone	3.17	Spike	P	0 - 30
2381541	Pyraclostrobin	1.15	Spike	P	0 - 30
2381541	Silvex	14.7	Spike	P	0 - 30
2381541	Thiamethoxam	1.83	Spike	P	0 - 30
2381541	Tolfenpyrad	1.59	Spike	P	0 - 30
2381541	Triclopyr	1.87	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P424945

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382025	3-Hydroxycarbofuran	9.80	Spike	P	0 - 30
2382025	Aldicarb	24.3	Spike	P	0 - 30
2382025	Aldicarb Sulfone	3.48	Spike	P	0 - 30
2382025	Aldicarb Sulfoxide	0.148	Spike	P	0 - 30
2382025	Carbaryl	1.92	Spike	P	0 - 30
2382025	Carbofuran	11.0	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P424945

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382025	Methiocarb	3.88	Spike	P	0 - 30
2382025	Methomyl	8.87	Spike	P	0 - 30
2382025	Oxamyl	0.543	Spike	P	0 - 30
2382025	Propoxur	0.864	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P425140

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382200	Total Alkalinity	0.844	Sample	P	0 - 3.8

Reference Method: SM 2320 B-2011
Batch ID: P425184

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382077	Total Alkalinity	0.401	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015
Batch ID: P425210

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2381422	TDS	4.77	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P425150

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382200	Fluoride	1.50	Spike	P	0 - 1.6

Reference Method: SM 4500-F- C-2011
Batch ID: P425188

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382077	Fluoride	1.00	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P425084

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2381999	Organic Carbon	8.58	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P425085

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382116	Organic Carbon	1.00	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2382025
Field Sample ID: G4NW0421

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	60.8	P	30 - 160

Lab Sample ID: 2382026
Field Sample ID: G4NW0421

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	86.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	82.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	53.9	P	30 - 160
EPA 8321B	Diuron-d6	62.5	P	30 - 160
EPA 8321B	Endothall-d6	98.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	102	P	30 - 160
EPA 8321B	Ibuprofen-d3	69.7	P	30 - 160
EPA 8321B	Primidone-d5	111	P	30 - 160
EPA 8321B	Sucralose-d6	94.1	P	30 - 160

Lab Sample ID: 2382027
Field Sample ID: G4NW0421

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	91.2	P	29 - 130
EPA 8270E	Decachlorobiphenyl	99.3	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	64.1	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	79.3	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	51.5	P	30 - 101
EPA 8276	PCNB	73.1	P	48 - 121

Lab Sample ID: 2382028
Field Sample ID: G4NW0421

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	80.3	P	20 - 200
EPA 8270E	Simazine-d10	118	P	62 - 142
EPA 8270E	Terbufos-d10	123	P	58 - 132
EPA 8270E	Terphenyl-d14	79.5	P	52 - 137

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A117009

Included Lab Sample IDs: 2382011, 2382013, 2382014

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A117014

Included Lab Sample IDs: 2382011, 2382013, 2382014

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	100	P/P	95 - 105

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A117051

Included Lab Sample IDs: 2382011, 2382013, 2382014

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	102	P/P	90 - 110
Sulfate	99.6	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A117080

Included Lab Sample IDs: 2382026

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	99.1	91.7	P/P	60 - 160
Sucralose	94.3	86.9	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A117084

Included Lab Sample IDs: 2382026

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	94.9	92.5	P/P	60 - 160
Endothall	95.3	91.6	P/P	60 - 160
Glufosinate	90.5	78.6	P/P	60 - 160
Glyphosate	98.8	91.7	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A117088

Included Lab Sample IDs: 2382026

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	107	101	P/P	50 - 150
2,4,5-T	121	112	P/P	50 - 150
Acetaminophen	109	92.3	P/P	60 - 160
Acetamiprid	106	131	P/P	50 - 150
Afidopyropen	88.9	95.0	P/P	50 - 150
Bentazon	130	121	P/P	50 - 160
Benzovindiflupyr	114	110	P/P	50 - 150
Carbamazepine	109	96.8	P/P	60 - 150
Clothianidin	124	106	P/P	60 - 150
Dinotefuran	117	116	P/P	50 - 150
Diuron	116	109	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A117088
Included Lab Sample IDs: 2382026

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fenuron	109	101	P/P	60 - 150
Fluridone	102	104	P/P	60 - 160
Hydrocodone	106	124	P/P	60 - 150
Ibuprofen	99.1	72.4	P/P	50 - 160
Imazapyr	92.0	123	P/P	50 - 150
Imidacloprid	114	109	P/P	60 - 150
Linuron	106	107	P/P	60 - 150
Mandestrobin	94.8	107	P/P	50 - 150
MCPP	122	99.7	P/P	50 - 150
Naproxen	101	111	P/P	50 - 160
Primidone	98.3	142	P/P	60 - 150
Pyraclostrobin	112	113	P/P	60 - 150
Silvex	125	102	P/P	50 - 150
Thiamethoxam	90.6	129	P/P	50 - 150
Tolfenpyrad	108	112	P/P	60 - 150
Triclopyr	124	106	P/P	50 - 150

Reference Method: EPA 8270E
Run ID: A117100
Included Lab Sample IDs: 2382028

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	91.6		P	80 - 120
Alachlor	89.8		P	80 - 120
Ametryn	118		P	80 - 120
Atrazine	107		P	80 - 120
Atrazine Desethyl	84.3		P	80 - 120
Azinphos Methyl	91.2		P	80 - 120
Azoxystrobin	98.9		P	80 - 120
Bromacil	101		P	80 - 120
Butylate	90.7		P	80 - 120
Caffeine	92.2		P	80 - 120
Carbophenothion	109		P	80 - 120
Carfentrazone Ethyl	91.3		P	80 - 120
Chlorfenapyr	80.1		P	80 - 120
Chlorpyrifos Ethyl	109		P	80 - 120
Chlorpyrifos Methyl	95.0		P	80 - 120
Coumaphos	72.2*		F	80 - 120
Cyanazine	101		P	80 - 120
Cyprodinil	101		P	80 - 120
Demeton	84.1		P	80 - 120
Diazinon	102		P	80 - 120
Difenoconazole	94.6		P	80 - 120
Dimethenamid	94.9		P	80 - 120
Dimethomorph	95.3		P	80 - 120
Disulfoton	90.4		P	80 - 120
Dithiopyr	87.6		P	80 - 120
EPTC	94.3		P	80 - 120
Ethion	107		P	80 - 120
Ethoprop	94.2		P	80 - 120
Etridiazole	80.1		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
 Run ID: A117100
 Included Lab Sample IDs: 2382028

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fenamiphos	82.6		P	80 - 120
Fenbuconazole	86.1		P	80 - 120
Fipronil	92.6		P	80 - 120
Fipronil Desulfinyl	80.5		P	80 - 120
Fipronil Sulfide	86.7		P	80 - 120
Fipronil Sulfone	112		P	80 - 120
Fluazifop-P-butyl	93.3		P	80 - 120
Fludioxonil	89.7		P	80 - 120
Flumioxazin	85.3		P	80 - 120
Flutolanil	105		P	80 - 120
Fluxapyroxad	69.4*		F	80 - 120
Fonofos	115		P	80 - 120
Hexazinone	95.7		P	80 - 120
Imazalil	88.1		P	80 - 120
Iprodione	61.4*		F	80 - 120
Loratadine	94.8		P	80 - 120
Malathion	90.0		P	80 - 120
Metalaxyl	88.3		P	80 - 120
Metolachlor	87.3		P	80 - 120
Metribuzin	108		P	80 - 120
Mevinphos	84.6		P	80 - 120
Molinate	92.9		P	80 - 120
Myclobutanil	99.8		P	80 - 120
Naled	83.8		P	80 - 120
Napropamide	101		P	80 - 120
Norflurazon	83.4		P	80 - 120
Oxadiazon	98.3		P	80 - 120
Oxyfluorfen	89.2		P	80 - 120
Parathion Ethyl	119		P	80 - 120
Parathion Methyl	86.7		P	80 - 120
Pendimethalin	81.8		P	80 - 120
Phenytoin	93.5		P	80 - 120
Phorate	112		P	80 - 120
Prodiamine	80.4		P	80 - 120
Prometon	87.9		P	80 - 120
Prometryn	82.9		P	80 - 120
Pronamide	88.6		P	80 - 120
Propanil	105		P	80 - 120
Propargite	117		P	80 - 120
Propiconazole	80.6		P	80 - 120
Pyraflufen Ethyl	103		P	80 - 120
Pyridaben	100		P	80 - 120
Pyriproxyfen	83.1		P	80 - 120
Simazine	98.7		P	80 - 120
Stirophos	89.6		P	80 - 120
Sulfentrazone	83.0		P	80 - 120
Tebuconazole	80.2		P	80 - 120
Terbufos	90.6		P	80 - 120
Terbuthylazine	105		P	80 - 120
Thiobencarb	94.5		P	80 - 120
Triadimefon	108		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A117104
Included Lab Sample IDs: 2382028

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	98.1		P	80 - 120
Avobenzene	101		P	80 - 120
Dechlorane Plus	97.7		P	80 - 120
Octinoxate	92.6		P	80 - 120
Oxybenzone	92.8		P	80 - 120
PBDE-47	96.0		P	80 - 120
PBDE-99	101		P	80 - 120
Tri-o-cresyl Phosphate	95.4		P	80 - 120

Reference Method: EPA 8276
Run ID: A117106
Included Lab Sample IDs: 2382027

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	101		P	80 - 120
Toxaphene	109		P	80 - 120

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A117119
Included Lab Sample IDs: 2382012, 2382015, 2382016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.8	100	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A117129
Included Lab Sample IDs: 2382025

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	118	138	P/P	60 - 150
Aldicarb	106	102	P/P	60 - 150
Aldicarb Sulfone	112	109	P/P	50 - 150
Aldicarb Sulfoxide	104	106	P/P	50 - 150
Carbaryl	130	117	P/P	60 - 150
Carbofuran	111	113	P/P	50 - 150
Methiocarb	108	110	P/P	50 - 150
Methomyl	108	111	P/P	50 - 150
Oxamyl	106	111	P/P	50 - 150
Propoxur	120	112	P/P	50 - 150

Reference Method: SM 5310 B-2011
Run ID: A117136
Included Lab Sample IDs: 2382012, 2382015, 2382016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	104	106	P/P	90 - 110
Organic Carbon	106	106	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A117138

Included Lab Sample IDs: 2382012, 2382015, 2382016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	99.0	P/P	90 - 110
NO2NO3-N	97.5	98.5	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A117146

Included Lab Sample IDs: 2382027

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	98.7		P	80 - 120
PCB-1260	101		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A117147

Included Lab Sample IDs: 2382029, 2382030, 2382031

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	108	110	P/P	90 - 110
Chromium	107	108	P/P	90 - 110
Iron	108	107	P/P	90 - 110
Magnesium	108	107	P/P	90 - 110
Potassium	108	106	P/P	90 - 110
Sodium	109	109	P/P	90 - 110
Strontium	106	107	P/P	90 - 110
Tin	109	110	P/P	90 - 110
Titanium	106	106	P/P	90 - 110
Vanadium	104	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A117148

Included Lab Sample IDs: 2382012, 2382015, 2382016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	105	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A117156

Included Lab Sample IDs: 2382027

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	105		P	80 - 120
Alpha-BHC	98.4		P	80 - 120
Alpha-Chlordane	103		P	80 - 120
Beta-BHC	103		P	80 - 120
Beta-Cyfluthrin	100		P	80 - 120
Bifenthrin	103		P	80 - 120
Chlorothalonil	105		P	80 - 120
Cis-Nonachlor	82.0		P	80 - 120
Cypermethrin	116		P	80 - 120
Dacthal	111		P	80 - 120
DDD-p,p'	106		P	80 - 120
DDE-p,p'	106		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A117156
Included Lab Sample IDs: 2382027

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
DDT-p,p'	98.5		P	80 - 120
Delta-BHC	102		P	80 - 120
Deltamethrin	101		P	80 - 120
Dichlobenil	97.8		P	80 - 120
Dicofol	83.5		P	80 - 120
Dieldrin	105		P	80 - 120
Endosulfan I	110		P	80 - 120
Endosulfan II	114		P	80 - 120
Endosulfan Sulfate	104		P	80 - 120
Endrin	108		P	80 - 120
Endrin Aldehyde	104		P	80 - 120
Endrin Ketone	113		P	80 - 120
Esfenvalerate	103		P	80 - 120
Ethalfuralin	96.5		P	80 - 120
Fenpropathrin	111		P	80 - 120
Gamma-BHC	108		P	80 - 120
Gamma-Chlordane	112		P	80 - 120
Heptachlor	113		P	80 - 120
Heptachlor Epoxide	108		P	80 - 120
Hexachlorobenzene	101		P	80 - 120
Kepone	85.5		P	80 - 120
Lambda-Cyhalothrin	111		P	80 - 120
Methoprene	102		P	80 - 120
Methoxychlor	92.8		P	80 - 120
MGK-264	103		P	80 - 120
Mirex	118		P	80 - 120
Oxychlordane	103		P	80 - 120
Permethrin	104		P	80 - 120
Phenothrin	110		P	80 - 120
Piperonyl Butoxide	84.2		P	80 - 120
Prallethrin	98.7		P	80 - 120
Tau-Fluvalinate	102		P	80 - 120
Tetramethrin	104		P	80 - 120
Trans-Nonachlor	110		P	80 - 120
Triclosan Methyl	113		P	80 - 120
Trifluralin	97.4		P	80 - 120

Reference Method: SM 2320 B-2011
Run ID: A117157
Included Lab Sample IDs: 2382011

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.1	95.2	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A117157
Included Lab Sample IDs: 2382011

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	103	104	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A117167

Included Lab Sample IDs: 2382029, 2382030, 2382031

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Zinc	99.2	103	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A117170

Included Lab Sample IDs: 2382029, 2382030, 2382031

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	100	102	P/P	90 - 110
Aluminum	102	103	P/P	90 - 110
Antimony	96.3	98.0	P/P	90 - 110
Antimony	98.0	97.3	P/P	90 - 110
Arsenic	100	101	P/P	90 - 110
Arsenic	101	100	P/P	90 - 110
Barium	98.7	98.8	P/P	90 - 110
Barium	98.8	99.5	P/P	90 - 110
Boron	103	103	P/P	90 - 110
Boron	103	104	P/P	90 - 110
Cadmium	100	101	P/P	90 - 110
Cadmium	101	101	P/P	90 - 110
Cobalt	93.2	93.7	P/P	90 - 110
Cobalt	93.7	94.8	P/P	90 - 110
Copper	97.1	98.0	P/P	90 - 110
Copper	98.0	98.5	P/P	90 - 110
Lead	97.9	98.4	P/P	90 - 110
Lead	98.4	99.1	P/P	90 - 110
Manganese	101	102	P/P	90 - 110
Manganese	99.1	101	P/P	90 - 110
Molybdenum	93.6	94.3	P/P	90 - 110
Molybdenum	94.3	93.9	P/P	90 - 110
Nickel	96.4	97.0	P/P	90 - 110
Nickel	97.0	97.9	P/P	90 - 110
Selenium	101	102	P/P	90 - 110
Selenium	102	100	P/P	90 - 110
Silver	98.0	99.0	P/P	90 - 110
Silver	99.0	98.2	P/P	90 - 110
Thallium	98.0	99.0	P/P	90 - 110
Thallium	99.0	98.6	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A117172

Included Lab Sample IDs: 2382013, 2382014

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.3	94.5	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A117172

Included Lab Sample IDs: 2382013, 2382014

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A117196

Included Lab Sample IDs: 2382029, 2382030, 2382031

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Beryllium	98.1	98.9	P/P	90 - 110
Beryllium	98.9	98.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A117254

Included Lab Sample IDs: 2382012, 2382015, 2382016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.8	98.5	P/P	90 - 110

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

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
DEP SOP: NU-094-1	Color (true)	100					1.30	
EPA 180.1 Rev. 2.0	Turbidity	100					0.0	
EPA 200.7 Rev. 4.4	Calcium	106	104	104				0.181
	Chromium	100	99.7	102	100			1.98
	Iron	104	106	107	105			0.602
	Magnesium	105	103	105	106			0.592
	Potassium	104	101	103	103			1.34
	Sodium	104	103	104				1.50
	Strontium	101	101	102	101			1.16
	Tin	105	104	105	104			0.882
	Titanium	102	101	103	102			1.86
	Vanadium	100	102	104	100			2.32
	Zinc	104	98.5	101	95.4			2.72
EPA 200.8 Rev. 5.4	Aluminum	99.0	96.8	100	102			3.16
	Antimony	94.5	97.7	98.5	98.1			0.826
	Arsenic	98.5	102	104	100			1.36
	Barium	97.8	100	101	104			0.954
	Beryllium	87.8	93.6	93.5	97.5			0.104
	Boron	104	97.4	101	107			2.73
	Cadmium	100	102	102	103			0.743
	Cobalt	91.9	93.4	95.6	95.2			2.34
	Copper	94.9	95.7	96.9	99.2			1.15
	Lead	93.1	95.0	97.2	96.3			2.24
	Manganese	97.0	94.8	97.5	105			1.69
	Molybdenum	92.2	94.3	96.9	95.1			2.01
	Nickel	95.0	98.0	99.0	100			0.974
	Selenium	95.6	98.9	99.8	97.7			0.986
	Silver	96.4	94.4	95.7	98.5			1.33
	Thallium	96.4	99.4	101	98.5			2.03
EPA 300.0 Rev. 2.1	Chloride	101	99.5	99.9			0.357	
	Sulfate	98.4	96.9	98.7			0.679	
EPA 350.1 Rev. 2.0	Ammonia-N	98.4	97.8	99.2				1.15
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	96.1	93.1				2.17
EPA 353.2 Rev. 2.0	NO2NO3-N	102	100	100				0.499
EPA 365.1 Rev. 2.0	Total-P	105	109	108				0.464
EPA 8270E	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	85.8	61.6	74.1				18.4
	Acetochlor	115	100	110				8.94
	Alachlor	109	109	101				7.90
	Aldrin	54.5	44.7	46.4				3.66
	Alpha-BHC	80.1	79.4	84.9				6.76
	Alpha-Chlordane	78.1	71.1	76.9				7.86
	Ametryn	102	117	97.4				18.1
	Atrazine	102	98.1	105				5.31
	Atrazine Desethyl	54.8	57.3	55.2				3.68
	Avobenzone	117	79.2	85.8				7.94
	Azinphos Methyl	194	200	188				6.34
	Azoxystrobin	86.8	96.0	89.7				6.73
	Beta-BHC	88.8	78.0	77.8				0.281
	Beta-Cyfluthrin	73.5	85.4	90.6				5.85
	Bifenthrin	66.9	79.9	73.1				8.87
	Bromacil	97.0	101	116				13.7
	Butylate	58.0	55.0	43.6				23.3

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Caffeine	89.8	85.8	85.1			0.824
	Carbophenothion	66.5	59.5	75.3			23.5
	Carfentrazone Ethyl	95.9	98.5	121			20.7
	Chlorfenapyr	69.1	71.7	78.2			8.69
	Chlorothalonil	87.1	107	98.4			8.35
	Chlorpyrifos Ethyl	112	110	118			6.89
	Chlorpyrifos Methyl	118	106	118			9.99
	Cis-Nonachlor	53.0	51.3	46.1			10.5
	Coumaphos	111	142	119			17.8
	Cyanazine	149	171	149			14.1
	Cypermethrin	64.3	69.0	72.2			4.60
	Cyprodinil	98.3	108	99.0			8.50
	Dacthal	80.1	72.9	74.6			2.23
	DDD-p,p'	75.9	69.2	74.4			7.28
	DDE-p,p'	69.8	64.1	66.8			4.07
	DDT-p,p'	65.9	60.4	61.5			1.76
	Dechlorane Plus	104	72.4	84.4			15.3
	Delta-BHC	102	88.9	91.9			3.27
	Deltamethrin	103	117	118			1.54
	Demeton	64.9	65.8	66.0			0.268
	Diazinon	106	130	104			22.6
	Dichlobenil	65.2	50.5	54.1			6.82
	Dicofol	54.4	60.3	60.2			0.124
	Dieldrin	72.3	67.7	69.9			3.03
	Difenoconazole	110	199	95.2			70.4
	Dimethenamid	90.4	96.5	83.5			14.4
	Dimethomorph	117	125	132			4.79
	Disulfoton	71.9	75.1	71.7			4.57
	Dithiopyr	90.5	103	93.7			9.45
	Endosulfan I	73.8	60.9	62.2			2.12
	Endosulfan II	82.0	70.8	74.0			4.41
	Endosulfan Sulfate	100	97.3	90.1			7.71
	Endrin	75.8	68.1	71.2			4.50
	Endrin Aldehyde	24.2	51.0	45.7			11.0
	Endrin Ketone	148	89.6	137			42.0
	EPTC	59.1	35.4	57.3			47.2
	Esfenvalerate	91.5	117	118			1.02
	Ethalfuralin	65.9	59.8	60.4			0.967
	Ethion	95.8	116	80.6			36.2
	Ethoprop	70.3	82.7	76.6			7.63
	Etridiazole	41.6	31.8	45.5			35.6
	Fenamiphos	112	107	113			5.98
	Fenbuconazole	89.8	119	111			7.29
	Fenpropathrin	74.2	68.6	76.5			10.9
	Fipronil	91.7	97.0	93.8			3.30
	Fipronil Desulfinyl	62.9	75.0	72.2			3.70
	Fipronil Sulfide	69.2	75.8	74.9			1.20
	Fipronil Sulfone	70.8	72.6	69.5			4.29
	Fluazifop-P-butyl	71.4	79.5	67.2			16.8
	Fludioxonil	91.8	106	91.1			15.3
	Flumioxazin	51.3	65.5	47.5			31.7
	Flutolanil	117	102	111			8.52
	Fluxapyroxad	67.2	77.0	77.8			0.924
	Fonofos	106	108	97.1			10.8

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision	
							SMP	MS
EPA 8270E	Gamma-BHC	79.3		69.3	72.3			4.27
	Gamma-Chlordane	78.9		75.0	75.6			0.810
	Heptachlor	65.9		55.1	57.6			4.43
	Heptachlor Epoxide	72.7		61.5	65.5			6.29
	Hexachlorobenzene	68.4		59.7	61.4			2.70
	Hexazinone	94.3		98.3	89.8			8.38
	Imazalil	96.6		87.3	71.3			20.2
	Iprodione	118		136	124			9.10
	Kepone	153		134	139			3.92
	Lambda-Cyhalothrin	63.5		80.3	81.8			1.77
	Loratadine	111		127	120			5.14
	Malathion	124		132	125			5.82
	Metalaxyl	81.4		89.2	95.4			6.73
	Methoprene	63.6		74.1	77.6			4.72
	Methoxychlor	84.7		88.3	80.2			9.63
	Metolachlor	101		93.0	90.6			2.17
	Metribuzin	102		114	100			12.7
	Mevinphos	88.3		104	101			2.68
	MGK-264	77.3		73.4	76.3			3.92
	Mirex	58.6		50.9	54.3			6.47
	Molinate	62.5		56.1	60.7			7.87
	Myclobutanil	120		124	118			4.87
	Naled	68.3		79.8	84.8			6.02
	Napropamide	66.4		60.7	55.6			8.80
	Norflurazon	95.5		105	90.0			14.4
	Octinoxate	80.7		59.1	63.8			7.68
	Oxadiazon	77.2		83.6	73.7			12.7
	Oxybenzone	77.6		62.0	67.3			8.18
	Oxychlordane	71.0		60.0	65.2			8.38
	Oxyfluorfen	107		114	112			1.67
	Parathion Ethyl	106		100	95.7			4.85
	Parathion Methyl	132		139	134			3.87
	PBDE-47	86.5		61.2	68.0			10.4
	PBDE-99	88.3		61.3	71.1			14.8
	PCB-1016	97.3	101	87.5		3.97		
	PCB-1260	109	117	98.7		7.10		
	Pendimethalin	92.9		96.4	105			8.57
	Permethrin	73.9		68.4	72.5			5.82
	Phenothrin	56.7		68.1	72.7			6.46
	Phenytoin	48.6		60.4	43.3			33.1
	Phorate	84.5		95.6	86.7			9.80
	Piperonyl Butoxide	138		87.7	90.3			2.93
	Prallethrin	80.8		88.2	88.0			0.159
	Prodiamine	59.5		74.1	61.3			18.9
	Prometon	87.1		91.0	104			13.1
	Prometryn	89.0		98.5	109			9.89
	Pronamide	119		122	121			0.466
	Propanil	107		116	103			11.2
	Propargite	135		119	116			3.00
	Propiconazole	99.3		106	99.6			5.88
	Pyraflufen Ethyl	120		118	116			1.49
	Pyridaben	117		162	169			4.57
	Pyriproxyfen	69.9		75.5	73.2			3.08
	Simazine	94.9		104	100			3.81

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8270E	Stiropfos	65.8	91.4	85.5			6.60
	Sulfentrazone	53.2	86.2	77.5			10.6
	Tau-Fluvalinate	78.4	107	111			4.13
	Tebuconazole	79.6	87.2	73.5			17.0
	Terbufos	70.2	74.6	75.9			1.79
	Terbutylazine	106	103	104			0.524
	Tetramethrin	100	107	103			4.12
	Thiobencarb	97.4	99.9	98.3			1.68
	Trans-Nonachlor	68.5	60.9	60.9			0.0590
	Tri-o-cresyl Phosphate	83.8	60.4	66.8			10.1
	Triadimefon	105	99.4	91.2			8.50
	Triclosan Methyl	88.2	75.6	77.6			2.55
	Trifluralin	68.8	61.8	60.1			2.69
	Chlordane	91.1	91.9	93.2			1.33
EPA 8276	Toxaphene	99.3	112	112			0.245
EPA 8321B	2,4-D	80.2	95.4	83.9			11.9
	2,4,5-T	68.8	94.8	103			8.74
	3-Hydroxycarbofuran	106	88.7	80.4			9.80
	Acesulfame K	97.0	97.9	98.3			0.448
	Acetaminophen	80.2	89.6	98.5			9.43
	Acetamiprid	90.9	99.4	93.1			6.55
	Afidopyropen	55.5	78.8	76.7			2.74
	Aldicarb	77.9	74.5	58.4			24.3
	Aldicarb Sulfone	83.4	84.6	81.7			3.48
	Aldicarb Sulfoxide	110	57.6	57.6			0.148
	AMPA	100	115	106			8.17
	Bentazon	74.9					10.6
	Benzovindiflupyr	81.4	72.3	83.6			14.5
	Carbamazepine	68.5	56.8	56.9			0.138
	Carbaryl	69.1	56.2	57.3			1.92
	Carbofuran	74.1	52.8	58.9			11.0
	Clothianidin	93.5	105	109			4.13
	Dinotefuran	97.8	120	126			5.30
	Diuron	67.5	42.3	49.7			9.24
	Endothall	93.2	95.0	93.9			1.18
	Fenuron	91.5	69.7	74.8			7.16
	Fluridone	75.0	68.9	73.0			3.18
	Glufosinate	98.1	92.0	94.8			3.03
	Glyphosate	99.5	106	84.5			22.4
	Hydrocodone	108	106	107			1.59
	Ibuprofen	86.6	56.8	72.3			24.1
	Imazapyr	106					9.40
	Imidacloprid	90.0	158	168			5.78
	Linuron	71.3	81.9	94.5			14.3
	Mandestrobin	80.1	78.6	81.9			4.13
	MCPP	89.1	102	108			6.01
	Methiocarb	65.3	64.7	62.2			3.88
	Methomyl	95.3	87.7	80.3			8.87
	Naproxen	85.1	96.3	82.9			14.9
	Oxamyl	90.9	85.2	85.6			0.543
	Primidone	111	119	123			3.17
	Propoxur	69.4	54.2	53.7			0.864
	Pyraclostrobin	59.8	76.0	76.9			1.15
	Silvex	61.3	74.5	86.3			14.7

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8321B	Sucralose	91.7	90.7	93.1			2.52
	Thiamethoxam	94.9	110	112			1.83
	Tolfenpyrad	42.7	55.2	56.1			1.59
	Triclopyr	65.5	96.9	95.1			1.87
SM 2320 B-2011	Total Alkalinity	95.9				0.844	
	Total Alkalinity	96.6				0.401	
SM 2540 C-2015	TDS	103				4.77	
SM 2540 D-2015	TSS	94.8					
SM 4500-F- C-2011	Fluoride	101	104	101			1.50
	Fluoride	101	101	100			1.00
SM 5310 B-2011	Organic Carbon	99.0	89.0	99.4			8.58
	Organic Carbon	104	102	104			1.00

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2382011, 2382013, 2382014
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2382011, 2382013, 2382014
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2382029, 2382030, 2382031
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2382029, 2382030, 2382031
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2382011, 2382013, 2382014
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2382011, 2382013, 2382014
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2382012, 2382015, 2382016
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2382012, 2382015, 2382016
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2382012, 2382015, 2382016
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2382012, 2382015, 2382016
EPA 8270E	Analysis of Sunscreen Compounds and Flame Retardants in Water by GC/MS-SIM	2382028
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2382027
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2382028
EPA 8270E	PCBs in water matrices by GC/MS/MS	2382027
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2382027
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2382025
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2382026
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2382011, 2382013, 2382014
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2382029, 2382030, 2382031
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2382011, 2382013, 2382014
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2382011, 2382013, 2382014
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2382011, 2382013, 2382014
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2382012, 2382015, 2382016

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	01/20/2023			01/20/2023 14:26	Alexis Price	2382011
	01/20/2023			01/20/2023 14:27	Alexis Price	2382013, 2382014
	01/20/2023			01/20/2023 14:59	Chandler E Cox	2382011
EPA 180.1 Rev. 2.0	01/20/2023			01/20/2023 15:00	Chandler E Cox	2382013
	01/20/2023			01/20/2023 15:01	Chandler E Cox	2382014
	01/20/2023	01/24/2023 11:10	Vijayalakshmi Reddy	01/28/2023 02:22	McKinley C Carter	2382029
EPA 200.7 Rev. 4.4	01/20/2023	01/24/2023 11:10	Vijayalakshmi Reddy	01/28/2023 02:27	McKinley C Carter	2382030
	01/20/2023	01/24/2023 11:10	Vijayalakshmi Reddy	01/28/2023 02:46	McKinley C Carter	2382031
	01/20/2023	01/24/2023 11:10	Vijayalakshmi Reddy	01/30/2023 19:10	McKinley C Carter	2382029
	01/20/2023	01/24/2023 11:10	Vijayalakshmi Reddy	01/30/2023 19:16	McKinley C Carter	2382030
	01/20/2023	01/24/2023 11:10	Vijayalakshmi Reddy	01/30/2023 19:28	McKinley C Carter	2382031
EPA 200.8 Rev. 5.4	01/20/2023	01/24/2023 11:10	Vijayalakshmi Reddy	01/30/2023 21:37	Emily M Philpot	2382030
	01/20/2023	01/24/2023 11:10	Vijayalakshmi Reddy	01/30/2023 22:25	Emily M Philpot	2382029
	01/20/2023	01/24/2023 11:10	Vijayalakshmi Reddy	01/30/2023 22:34	Emily M Philpot	2382031
	01/20/2023	01/24/2023 11:10	Vijayalakshmi Reddy	01/31/2023 20:02	Emily M Philpot	2382030
	01/20/2023	01/24/2023 11:10	Vijayalakshmi Reddy	01/31/2023 20:33	Emily M Philpot	2382029
EPA 300.0 Rev. 2.1	01/20/2023	01/24/2023 11:10	Vijayalakshmi Reddy	01/31/2023 20:39	Emily M Philpot	2382031
	01/20/2023			01/25/2023 12:24	Anna M. Plaviak	2382011
	01/20/2023			01/25/2023 12:39	Anna M. Plaviak	2382013
	01/20/2023			01/25/2023 12:54	Anna M. Plaviak	2382014
EPA 350.1 Rev. 2.0	01/20/2023			02/03/2023 12:03	Ping Hua	2382012
	01/20/2023			02/03/2023 12:04	Ping Hua	2382015
	01/20/2023			02/03/2023 12:06	Ping Hua	2382016
EPA 351.2 Rev. 2.0	01/20/2023	01/26/2023 10:00	Simonne.V. Calhoun	01/27/2023 16:51	Judith K. Clark	2382012
	01/20/2023	01/26/2023 10:00	Simonne.V. Calhoun	01/27/2023 16:52	Judith K. Clark	2382015
	01/20/2023	01/26/2023 10:00	Simonne.V. Calhoun	01/27/2023 16:54	Judith K. Clark	2382016
EPA 353.2 Rev. 2.0	01/20/2023			01/27/2023 10:05	Beverly Y. Sanders	2382012
	01/20/2023			01/27/2023 10:07	Beverly Y. Sanders	2382015
	01/20/2023			01/27/2023 11:26	Beverly Y. Sanders	2382016
EPA 365.1 Rev. 2.0	01/20/2023	01/25/2023 13:55	Adam P Silver	01/26/2023 14:12	James L Waggeberby	2382012
	01/20/2023	01/25/2023 13:55	Adam P Silver	01/26/2023 14:13	James L Waggeberby	2382015
	01/20/2023	01/25/2023 13:55	Adam P Silver	01/26/2023 14:14	James L Waggeberby	2382016
EPA 8270E	01/20/2023	01/23/2023 08:00	Fe-Val Siddell	01/24/2023 15:26	Michael Poppell	2382028
	01/20/2023	01/23/2023 08:00	Fe-Val Siddell	01/24/2023 19:51	Arthur Maknenko	2382028
	01/20/2023	01/23/2023 08:30	Rasheda Ghaffari	01/29/2023 00:15	Julie Wi	2382027
	01/20/2023	01/26/2023 11:00	Rasheda Ghaffari	01/27/2023 22:39	Vandana T. Nagar	2382027
EPA 8276	01/20/2023	01/23/2023 08:30	Rasheda Ghaffari	01/25/2023 11:57	Lipi Saha	2382027
EPA 8321B	01/20/2023	01/23/2023 14:00	June Rhew	01/24/2023 21:32	Juyoung Kim	2382026
	01/20/2023	01/24/2023 12:00	Manjita Shrestha	01/24/2023 15:05	Manjita Shrestha	2382026
	01/20/2023	01/24/2023 12:00	Manjita Shrestha	01/25/2023 01:45	Manjita Shrestha	2382026

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	01/20/2023	01/26/2023 09:00	Hoor Shaik	01/26/2023 16:07	Juyoung Kim	2382025
SM 2320 B-2011	01/20/2023			01/28/2023 06:36	Dale L. Simmons	2382011
	01/20/2023			01/30/2023 21:13	Dale L. Simmons	2382013
	01/20/2023			01/30/2023 21:23	Dale L. Simmons	2382014
SM 2340 B-2011	01/20/2023	01/26/2023 09:00	Hoor Shaik	01/28/2023 02:22	McKinley C Carter	2382029
	01/20/2023			01/28/2023 02:27	McKinley C Carter	2382030
	01/20/2023			01/28/2023 02:46	McKinley C Carter	2382031
	01/20/2023			01/23/2023 16:20	Yijie Li	2382011, 2382013, 2382014
SM 2540 C-2015	01/20/2023	01/26/2023 09:00	Hoor Shaik	01/23/2023 16:20	Yijie Li	2382011, 2382013, 2382014
SM 2540 D-2015	01/20/2023			01/28/2023 06:36	Dale L. Simmons	2382011
SM 4500-F- C-2011	01/20/2023			01/30/2023 21:13	Dale L. Simmons	2382013
	01/20/2023			01/30/2023 21:23	Dale L. Simmons	2382014
	01/20/2023			01/27/2023 01:48	Khloe J Berg	2382012
	01/20/2023			01/27/2023 04:00	Khloe J Berg	2382015
SM 5310 B-2011	01/20/2023	01/26/2023 09:00	Hoor Shaik	01/27/2023 04:13	Khloe J Berg	2382016
	01/20/2023					