Chemical Analysis Report

SE-DIST-2019-12-13-01

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

Event Description: **SMP-Greasy**
Request ID: **RQ-2019-12-09-59**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
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2199 South Rock Road
Fort Pierce, FL 34945
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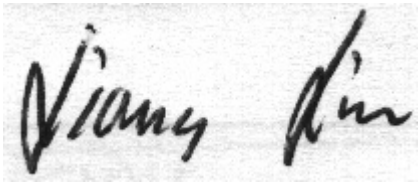
Certified by: Liang Lin, Environmental Administrator

Date Certified: 08-JAN-2020 09:48



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: New River @ NW 27th **Collection Date/Time: 12/12/2019 11:45**

Field ID: G4SE0085 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2143832	EPA 180.1 Rev. 2.0	Turbidity	4.4	A	NTU	P376185	
	EPA 300.0	Bromide	0.28		mg Br/L	P376393	
	SM 2320 B-97	Total Alkalinity	117		mg CaCO3/L	P376259	
	SM 2540 D-97	TSS	12		mg/L	P376362	
	SM 4500 F-C-97	Fluoride	0.10		mg F/L	P376262	
2143834	EPA 350.1 Rev. 2.0	Ammonia-N	0.17		mg N/L	P376278	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.57		mg N/L	P375916	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.13		mg N/L	P376333	
	EPA 365.1 Rev. 2.0	Total-P	0.096		mg P/L	P375927	
	SM 5310 B-00	Organic Carbon	5.1		mg C/L	P375979	
2143836	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.032		mg P/L	P375860	
2143858	EPA 8321B	Aldicarb	0.020	U	ug/L	P375695	RPD
		Aldicarb Sulfone	0.0020	U	ug/L	P375695	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P375695	MS
		Carbaryl	0.0020	U	ug/L	P375695	
		Carbofuran	0.0020	U	ug/L	P375695	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P375695	
		Methiocarb	0.0020	U	ug/L	P375695	
		Methomyl	0.0020	U	ug/L	P375695	
		Oxamyl	0.0020	U	ug/L	P375695	
		Propoxur	0.0020	U	ug/L	P375695	
2143860		2,4-D	0.093		ug/L	P375999	
		Acesulfame K**	0.10	U	ug/L	P375926	
		AMPA**	0.25	I	ug/L	P375926	
		Sucralose**	0.12		ug/L	P375926	
		Acetaminophen**	0.083		ug/L	P375999	RPD
		Endothall**	0.25	U	ug/L	P375926	
		Acetamiprid**	0.0020	U	ug/L	P375999	RPD
		Glufosinate**	0.10	U	ug/L	P375926	
		Glyphosate**	0.61		ug/L	P375926	
		Afidopyropen**	0.0020	UJ	ug/L	P375999	RPD
		Bentazon	0.043		ug/L	P375999	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P375999	
		Carbamazepine**	8.0E-04	U	ug/L	P375999	
		Clothianidin**	0.0059	I	ug/L	P375999	
		Dinotefuran**	0.0022	I	ug/L	P375999	RPD
		Diuron	0.012		ug/L	P375999	
		Fenuron	0.016	U	ug/L	P375999	RPD
		Fluridone**	0.0041		ug/L	P375999	
		Imazapyr**	0.018		ug/L	P375999	
		Hydrocodone**	0.0020	U	ug/L	P375999	MS, RPD
		Ibuprofen**	0.020	U	ug/L	P375999	
		Imidacloprid	0.061		ug/L	P375999	MS

Field ID: G4SE0085 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2143860	EPA 8321B	Linuron	0.0040	U	ug/L	P375999	
		Mandestrobin**	0.0020	UJ	ug/L	P375999	
		MCPP	0.019	J	ug/L	P375999	LCS, MS
		Naproxen**	0.014	I	ug/L	P375999	
		Primidone**	0.0040	U	ug/L	P375999	
		Pyraclostrobin**	0.0020	U	ug/L	P375999	
		Thiamethoxam**	0.0020	U	ug/L	P375999	MS
		Tolfenpyrad**	0.0020	U	ug/L	P375999	
		Triclopyr**	0.0040	U	ug/L	P375999	MS, RPD
2143864	EPA 8270E	Aldrin	4.2	U	ng/L	P375746	
		Alpha-BHC	2.1	U	ng/L	P375746	
		Alpha-Chlordane	1.0	U	ng/L	P375746	
		Beta-BHC	10	U	ng/L	P375746	
		Bifenthrin**	4.2	U	ng/L	P375746	
		Delta-BHC	8.4	U	ng/L	P375746	
		Gamma-BHC	8.4	U	ng/L	P375746	
		Carbophenothion	10	U	ng/L	P375746	
		Chlorothalonil	2.1	U	ng/L	P375746	
		Cis-Nonachlor**	1.0	U	ng/L	P375746	MS
		Cypermethrin	21	U	ng/L	P375746	
		DDD-p,p'	6.3	U	ng/L	P375746	
		DDE-p,p'	6.3	U	ng/L	P375746	
		DDT-p,p'	7.3	U	ng/L	P375746	
		Dicofol	31	U	ng/L	P375746	
		Dieldrin	4.2	U	ng/L	P375746	
		Endosulfan I	4.2	U	ng/L	P375746	
		Endosulfan II	4.2	U	ng/L	P375746	
		Endosulfan Sulfate	2.1	U	ng/L	P375746	
		Endrin	2.1	U	ng/L	P375746	
		Endrin Aldehyde	2.1	U	ng/L	P375746	
		Endrin Ketone	2.1	U	ng/L	P375746	
		Ethalfluralin**	3.1	U	ng/L	P375746	MS
		Gamma-Chlordane	1.0	U	ng/L	P375746	
		Heptachlor	1.6	U	ng/L	P375746	
		Heptachlor Epoxide	2.1	U	ng/L	P375746	
		Hexachlorobenzene	2.1	U	ng/L	P375746	
		Methoxychlor	4.2	U	ng/L	P375746	
		Mirex	2.1	U	ng/L	P375746	
		Permethrin	10	U	ng/L	P375746	
		Trans-Nonachlor**	1.0	U	ng/L	P375746	MS
		Trifluralin	2.6	U	ng/L	P375746	
	EPA 8276	Chlordane	5.2	U	ng/L	P375746	
		Toxaphene	31	U	ng/L	P375746	
2143866	EPA 8270E	Acetochlor	0.24	U	ng/L	P376091	
		Alachlor	0.24	U	ng/L	P376091	

Field ID: G4SE0085 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2143866	EPA 8270E	Ametryn	0.59	U	ng/L	P376091	
		Atrazine	43		ng/L	P376091	
		Atrazine Desethyl	8.5		ng/L	P376091	
		Azinphos Methyl	4.9	U	ng/L	P376091	
		Bromacil	0.49	U	ng/L	P376091	
		Butylate	0.39	U	ng/L	P376091	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P376091	
		Chlorpyrifos Methyl	0.098	U	ng/L	P376091	
		Cyanazine	3.2	U	ng/L	P376091	
		Demeton	6.9	U	ng/L	P376091	
		Diazinon	0.13	I	ng/L	P376091	
		Dimethenamid**	0.098	U	ng/L	P376091	
		Disulfoton	0.49	U	ng/L	P376091	
		Dithiopyr**	0.098	U	ng/L	P376091	
		EPTC	1.2	U	ng/L	P376091	
		Ethion	0.15	U	ng/L	P376091	
		Ethoprop	0.098	U	ng/L	P376091	
		Fenamiphos	0.49	U	ng/L	P376091	
		Fipronil	3.2		ng/L	P376091	
		Fipronil Desulfinyl**	1.0		ng/L	P376091	
		Fipronil Sulfide	0.80		ng/L	P376091	
		Fipronil Sulfone	1.7		ng/L	P376091	
		Fonofos	0.20	U	ng/L	P376091	
		Hexazinone	3.8		ng/L	P376091	
		Malathion	0.34	U	ng/L	P376091	
		Metalaxyl	1.9		ng/L	P376091	
		Metolachlor	0.49	U	ng/L	P376091	
		Metribuzin	0.73	U	ng/L	P376091	
		Mevinphos	0.49	U	ng/L	P376091	
		Molinate	0.29	U	ng/L	P376091	
		Norflurazon	0.49	U	ng/L	P376091	
		Oxadiazon**	1.7	J	ng/L	P376091	MS
		Parathion Ethyl	0.24	U	ng/L	P376091	
		Parathion Methyl	0.54	U	ng/L	P376091	
		Pendimethalin	0.98	U	ng/L	P376091	
		Phorate	0.24	U	ng/L	P376091	
		Prodiamine**	0.58	I	ng/L	P376091	
		Prometon	0.88	U	ng/L	P376091	
		Prometryn	0.20	U	ng/L	P376091	
		Simazine	0.49	U	ng/L	P376091	
		Tebuconazole**	1.6	I J	ng/L	P376091	MS
		Terbufos	0.098	U	ng/L	P376091	
		Terbuthylazine	0.42	U	ng/L	P376091	
2143868	EPA 200.7 Rev. 4.4	Iron	470		ug/L	P375985	
		Manganese	7.3		ug/L	P375985	

Field ID: G4SE0085 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2143868	EPA 200.7 Rev. 4.4	Zinc	25		ug/L	P375985	
	EPA 200.8 Rev. 5.4	Aluminum	98		ug/L	P375985	
		Antimony	0.67		ug/L	P375985	
		Arsenic	1.78		ug/L	P375985	
		Cadmium	0.040	I	ug/L	P375985	
		Chromium	1.1	I	ug/L	P375985	
		Copper	4.57		ug/L	P375985	
		Lead	4.39		ug/L	P375985	
		Nickel	0.69	I	ug/L	P375985	
		Selenium	0.20	U	ug/L	P375985	
		Silver	0.022	I	ug/L	P375985	
		Thallium	0.21	I	ug/L	P375985	

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample. Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8270E: MS accuracy for atrazine not assessed due to high content of this parameter in the sample spiked. Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 200.8 Rev. 5.4: The copper result was confirmed in the undigested sample on 01/06/2020.

Sample Location: North Fork New River @ Sistrunk **Collection Date/Time: 12/12/2019 12:50**

Field ID: G4SEB064 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2143833	EPA 180.1 Rev. 2.0	Turbidity	3.6		NTU	P376185	
	EPA 300.0	Bromide	0.28		mg Br/L	P376393	
	SM 2320 B-97	Total Alkalinity	118		mg CaCO3/L	P376259	
	SM 2540 D-97	TSS	8	I	mg/L	P376362	
	SM 4500 F-C-97	Fluoride	0.10		mg F/L	P376262	
2143835	EPA 350.1 Rev. 2.0	Ammonia-N	0.15		mg N/L	P376278	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.60		mg N/L	P375916	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.13		mg N/L	P376333	
	EPA 365.1 Rev. 2.0	Total-P	0.082		mg P/L	P375927	
	SM 5310 B-00	Organic Carbon	5.2		mg C/L	P375979	
2143837	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.031		mg P/L	P375860	
2143859	EPA 8321B	Aldicarb	0.020	U	ug/L	P375695	RPD
		Aldicarb Sulfone	0.0020	U	ug/L	P375695	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P375695	MS
		Carbaryl	0.0020	U	ug/L	P375695	
		Carbofuran	0.0020	U	ug/L	P375695	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P375695	
		Methiocarb	0.0020	U	ug/L	P375695	
		Methomyl	0.0020	U	ug/L	P375695	
		Oxamyl	0.0020	U	ug/L	P375695	
		Propoxur	0.0020	U	ug/L	P375695	
2143861		2,4-D	0.094		ug/L	P375999	
		Acesulfame K**	0.10	U	ug/L	P375926	
		AMPA**	0.34	I	ug/L	P375926	
		Sucralose**	0.12		ug/L	P375926	
		Acetaminophen**	0.087		ug/L	P375999	RPD
		Endothall**	0.25	U	ug/L	P375926	
		Acetamiprid**	0.0020	U	ug/L	P375999	RPD
		Glufosinate**	0.10	U	ug/L	P375926	
		Glyphosate**	0.69		ug/L	P375926	
		Afidopyropen**	0.0020	UJ	ug/L	P375999	RPD
		Bentazon	0.044		ug/L	P375999	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P375999	
		Carbamazepine**	8.0E-04	U	ug/L	P375999	
		Clothianidin**	0.0069	I	ug/L	P375999	
		Dinotefuran**	0.0020	U	ug/L	P375999	RPD
		Diuron	0.015		ug/L	P375999	
		Fenuron	0.016	U	ug/L	P375999	RPD
		Fluridone**	0.0044		ug/L	P375999	
		Imazapyr**	0.079		ug/L	P375999	
		Hydrocodone**	0.0020	U	ug/L	P375999	MS, RPD
		Ibuprofen**	0.020	U	ug/L	P375999	
		Imidacloprid	0.065		ug/L	P375999	MS

Field ID: G4SEB064 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2143861	EPA 8321B	Linuron	0.0040	U	ug/L	P375999	
		Mandestrobin**	0.0020	UJ	ug/L	P375999	
		MCPP	0.018	J	ug/L	P375999	LCS, MS
		Naproxen**	0.0085	I	ug/L	P375999	
		Primidone**	0.0040	U	ug/L	P375999	
		Pyraclostrobin**	0.0020	U	ug/L	P375999	
		Thiamethoxam**	0.0020	U	ug/L	P375999	MS
		Tolfenpyrad**	0.0020	U	ug/L	P375999	
		Triclopyr**	0.0040	U	ug/L	P375999	MS, RPD
2143865	EPA 8270E	Aldrin	4.3	U	ng/L	P375746	
		Alpha-BHC	2.2	U	ng/L	P375746	
		Alpha-Chlordane	1.1	U	ng/L	P375746	
		Beta-BHC	11	U	ng/L	P375746	
		Bifenthrin**	4.3	U	ng/L	P375746	
		Delta-BHC	8.6	U	ng/L	P375746	
		Gamma-BHC	8.6	U	ng/L	P375746	
		Carbophenothion	11	U	ng/L	P375746	
		Chlorothalonil	2.2	U	ng/L	P375746	
		Cis-Nonachlor**	1.1	U	ng/L	P375746	MS
		Cypermethrin	22	U	ng/L	P375746	
		DDD-p,p'	6.5	U	ng/L	P375746	
		DDE-p,p'	6.5	U	ng/L	P375746	
		DDT-p,p'	7.6	U	ng/L	P375746	
		Dicofol	32	U	ng/L	P375746	
		Dieldrin	4.3	U	ng/L	P375746	
		Endosulfan I	4.3	U	ng/L	P375746	
		Endosulfan II	4.3	U	ng/L	P375746	
		Endosulfan Sulfate	2.2	U	ng/L	P375746	
		Endrin	2.2	U	ng/L	P375746	
		Endrin Aldehyde	2.2	U	ng/L	P375746	
		Endrin Ketone	2.2	U	ng/L	P375746	
		Ethalfluralin**	3.2	U	ng/L	P375746	MS
		Gamma-Chlordane	1.1	U	ng/L	P375746	
		Heptachlor	1.6	U	ng/L	P375746	
		Heptachlor Epoxide	2.2	U	ng/L	P375746	
		Hexachlorobenzene	2.2	U	ng/L	P375746	
		Methoxychlor	4.3	U	ng/L	P375746	
		Mirex	2.2	U	ng/L	P375746	
		Permethrin	11	U	ng/L	P375746	
		Trans-Nonachlor**	1.1	U	ng/L	P375746	MS
		Trifluralin	2.7	U	ng/L	P375746	
	EPA 8276	Chlordane	5.4	U	ng/L	P375746	
		Toxaphene	32	U	ng/L	P375746	
2143867	EPA 8270E	Acetochlor	0.25	U	ng/L	P376091	
		Alachlor	0.25	U	ng/L	P376091	

Field ID: G4SEB064 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2143867	EPA 8270E	Ametryn	0.59	U	ng/L	P376091	
		Atrazine	42		ng/L	P376091	
		Atrazine Desethyl	8.2		ng/L	P376091	
		Azinphos Methyl	4.9	U	ng/L	P376091	
		Bromacil	0.49	U	ng/L	P376091	
		Butylate	0.39	U	ng/L	P376091	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P376091	
		Chlorpyrifos Methyl	0.098	U	ng/L	P376091	
		Cyanazine	3.2	U	ng/L	P376091	
		Demeton	6.9	U	ng/L	P376091	
		Diazinon	0.13	I	ng/L	P376091	
		Dimethenamid**	0.098	U	ng/L	P376091	
		Disulfoton	0.49	U	ng/L	P376091	
		Dithiopyr**	0.098	U	ng/L	P376091	
		EPTC	1.2	U	ng/L	P376091	
		Ethion	0.15	U	ng/L	P376091	
		Ethoprop	0.098	U	ng/L	P376091	
		Fenamiphos	0.49	U	ng/L	P376091	
		Fipronil	3.2		ng/L	P376091	
		Fipronil Desulfinyl**	0.95		ng/L	P376091	
		Fipronil Sulfide	0.77		ng/L	P376091	
		Fipronil Sulfone	1.4		ng/L	P376091	
		Fonofos	0.20	U	ng/L	P376091	
		Hexazinone	3.8		ng/L	P376091	
		Malathion	0.34	U	ng/L	P376091	
		Metalaxyl	0.88	I	ng/L	P376091	
		Metolachlor	0.49	U	ng/L	P376091	
		Metribuzin	0.74	U	ng/L	P376091	
		Mevinphos	0.49	U	ng/L	P376091	
		Molinate	0.29	U	ng/L	P376091	
		Norflurazon	0.49	U	ng/L	P376091	
		Oxadiazon**	1.2		ng/L	P376091	MS
		Parathion Ethyl	0.25	U	ng/L	P376091	
		Parathion Methyl	0.54	U	ng/L	P376091	
		Pendimethalin	0.98	U	ng/L	P376091	
		Phorate	0.25	U	ng/L	P376091	
		Prodiamine**	1.4		ng/L	P376091	
		Prometon	0.88	U	ng/L	P376091	
		Prometryn	0.20	U	ng/L	P376091	
		Simazine	0.49	U	ng/L	P376091	
		Tebuconazole**	0.87	I	ng/L	P376091	MS
		Terbufos	0.098	U	ng/L	P376091	
		Terbuthylazine	0.42	U	ng/L	P376091	
2143869	EPA 200.7 Rev. 4.4	Iron	330		ug/L	P375985	
		Manganese	6.8		ug/L	P375985	

Field ID: G4SEB064 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2143869	EPA 200.7 Rev. 4.4	Zinc	20	I	ug/L	P375985	
	EPA 200.8 Rev. 5.4	Aluminum	65		ug/L	P375985	
		Antimony	0.69		ug/L	P375985	
		Arsenic	1.67		ug/L	P375985	
		Cadmium	0.036	I	ug/L	P375985	
		Chromium	0.93	I	ug/L	P375985	
		Copper	3.90		ug/L	P375985	
		Lead	2.90		ug/L	P375985	
		Nickel	0.62	I	ug/L	P375985	
		Selenium	0.20	U	ug/L	P375985	
		Silver	0.024	I	ug/L	P375985	
		Thallium	0.10	U	ug/L	P375985	

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample. Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8270E: MS accuracy for atrazine not assessed due to high content of this parameter in the sample spiked.
EPA 200.8 Rev. 5.4: The copper result was confirmed in the undigested sample on 01/06/2020.

Sample Location: Middle River @ US 1 **Collection Date/Time: 12/12/2019 13:45**

Field ID: G4SE0113 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2143862	EPA 8321B	2,4-D	0.017		ug/L	P375999	
		Acesulfame K**	0.10	UJ	ug/L	P375926	SUR
		AMPA**	0.10	UJ	ug/L	P375926	SUR
		Sucralose**	0.23		ug/L	P375926	
		Acetaminophen**	0.044		ug/L	P375999	RPD
		Acetamiprid**	0.0020	U	ug/L	P375999	RPD
		Endothall**	0.25	UJ	ug/L	P375926	SUR
		Glufosinate**	0.10	UJ	ug/L	P375926	SUR
		Glyphosate**	0.10	UJ	ug/L	P375926	SUR
		Afidopyropen**	0.0020	UJ	ug/L	P375999	RPD
		Bentazon	0.028		ug/L	P375999	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P375999	
		Carbamazepine**	0.0031	I	ug/L	P375999	
		Clothianidin**	0.0020	U	ug/L	P375999	
		Dinotefuran**	0.0020	U	ug/L	P375999	RPD
		Diuron	0.015		ug/L	P375999	
		Fenuron	0.016	U	ug/L	P375999	RPD
		Fluridone**	0.0055		ug/L	P375999	
		Imazapyr**	0.055		ug/L	P375999	
		Hydrocodone**	0.0020	U	ug/L	P375999	MS, RPD
		Ibuprofen**	0.020	U	ug/L	P375999	
		Imidacloprid	0.053		ug/L	P375999	MS
		Linuron	0.0040	U	ug/L	P375999	
		Mandestrobin**	0.0020	UJ	ug/L	P375999	
		MCPP	0.0020	UJ	ug/L	P375999	LCS, MS
		Naproxen**	0.010	I	ug/L	P375999	
		Primidone**	0.0040	U	ug/L	P375999	
		Pyraclostrobin**	0.0020	U	ug/L	P375999	
		Thiamethoxam**	0.0020	U	ug/L	P375999	MS
		Tolfenpyrad**	0.0020	U	ug/L	P375999	
		Triclopyr**	0.0040	U	ug/L	P375999	MS, RPD

Ref. Method and Comment:
EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample. Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8321B: Results confirmed in sample duplicate. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: North Fork Middle River @ NE 16th Ave. **Collection Date/Time: 12/12/2019 14:00**

Field ID: G4SE0121 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2143863	EPA 8321B	2,4-D	0.011		ug/L	P375999	
		Acesulfame K**	0.10	UJ	ug/L	P375926	SUR
		AMPA**	0.10	UJ	ug/L	P375926	SUR
		Sucralose**	0.18		ug/L	P375926	
		Acetaminophen**	0.038		ug/L	P375999	RPD
		Acetamiprid**	0.0020	U	ug/L	P375999	RPD
		Endothall**	0.25	UJ	ug/L	P375926	SUR
		Glufosinate**	0.10	UJ	ug/L	P375926	SUR
		Glyphosate**	0.10	UJ	ug/L	P375926	SUR
		Afidopyropen**	0.0020	UJ	ug/L	P375999	RPD
		Bentazon	0.033		ug/L	P375999	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P375999	
		Carbamazepine**	0.0036		ug/L	P375999	
		Clothianidin**	0.0020	U	ug/L	P375999	
		Dinotefuran**	0.0027	I	ug/L	P375999	RPD
		Diuron	0.024		ug/L	P375999	
		Fenuron	0.016	U	ug/L	P375999	RPD
		Fluridone**	0.0057		ug/L	P375999	
		Imazapyr**	0.073		ug/L	P375999	
		Hydrocodone**	0.0020	U	ug/L	P375999	MS, RPD
		Ibuprofen**	0.020	U	ug/L	P375999	
		Imidacloprid	0.055		ug/L	P375999	MS
		Linuron	0.0040	U	ug/L	P375999	
		Mandestrobin**	0.0020	UJ	ug/L	P375999	
		MCPP	0.0020	UJ	ug/L	P375999	LCS, MS
		Naproxen**	0.013	I	ug/L	P375999	
		Primidone**	0.0040	U	ug/L	P375999	
		Pyraclostrobin**	0.0020	U	ug/L	P375999	
		Thiamethoxam**	0.0020	U	ug/L	P375999	MS
		Tolfenpyrad**	0.0020	U	ug/L	P375999	
		Triclopyr**	0.0040	U	ug/L	P375999	MS, RPD

Ref. Method and Comment:
EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample. Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8321B: Results confirmed in sample duplicate. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Cypress @ 441 Margate **Collection Date/Time: 12/12/2019 14:30**

Field ID: G4SE0038 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2143829	EPA 180.1 Rev. 2.0	Turbidity	2.4	A	NTU	P376186	
	EPA 300.0 Rev. 2.1	Chloride	70		mg Cl/L	P376425	
		Sulfate	17		mg SO4/L	P376427	
	SM 2120 B	Color (true)	50		PCU	P375987	
	SM 2320 B-97	Total Alkalinity	142		mg CaCO3/L	P376259	
	SM 2540 C-97	TDS	294		mg/L	P376419	
	SM 2540 D-97	TSS	4	I	mg/L	P376359	
	SM 4500 F-C-97	Fluoride	0.22		mg F/L	P376262	
2143830	EPA 350.1 Rev. 2.0	Ammonia-N	0.023		mg N/L	P376278	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.97		mg N/L	P375916	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.033		mg N/L	P375963	
	EPA 365.1 Rev. 2.0	Total-P	0.025		mg P/L	P375927	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P375979	
2143831	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P375856	
2143857	EPA 8321B	2,4-D	0.19		ug/L	P375999	
		Acesulfame K**	0.10	U	ug/L	P375926	
		AMPA**	0.18	I	ug/L	P375926	
		Sucralose**	0.076		ug/L	P375926	
		Acetaminophen**	0.0080	UJ	ug/L	P375999	RPD
		Endothall**	0.25	U	ug/L	P375926	
		Acetamiprid**	0.0020	UJ	ug/L	P375999	RPD
		Glufosinate**	0.10	U	ug/L	P375926	
		Glyphosate**	1.6		ug/L	P375926	
		Afidopyropen**	0.0020	UJ	ug/L	P375999	RPD
		Bentazon	0.025		ug/L	P375999	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P375999	
		Carbamazepine**	8.0E-04	U	ug/L	P375999	
		Clothianidin**	0.0020	U	ug/L	P375999	
		Dinotefuran**	0.0020	UJ	ug/L	P375999	RPD
		Diuron	0.0080		ug/L	P375999	
		Fenuron	0.016	UJ	ug/L	P375999	RPD
		Fluridone**	0.042		ug/L	P375999	
		Imazapyr**	0.15		ug/L	P375999	
		Hydrocodone**	0.0020	UJ	ug/L	P375999	MS, RPD
		Ibuprofen**	0.020	U	ug/L	P375999	
		Imidacloprid	0.032	J	ug/L	P375999	MS
		Linuron	0.0040	U	ug/L	P375999	
		Mandestrobin**	0.0020	UJ	ug/L	P375999	
		MCPP	0.0063	I J	ug/L	P375999	LCS, MS
		Naproxen**	0.0080	U	ug/L	P375999	
		Primidone**	0.0040	U	ug/L	P375999	
		Pyraclostrobin**	0.0020	U	ug/L	P375999	
		Thiamethoxam**	0.0020	UJ	ug/L	P375999	MS

Field ID: G4SE0038 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2143857	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P375999	
		Triclopyr**	0.0040	UJ	ug/L	P375999	MS, RPD

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Cypress @ 441 Margate **Collection Date/Time: 12/12/2019 14:45**

Field ID: FB_12122019 Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2143838	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P376186	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P376406	
		Sulfate	0.20	U	mg SO4/L	P376408	
	SM 2120 B	Color (true)	2.5	U	PCU	P375987	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P376259	
	SM 2540 C-97	TDS	15	U	mg/L	P376416	
	SM 2540 D-97	TSS	2	U	mg/L	P376356	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P376262	
2143839	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P376278	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P375916	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P375963	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P375927	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P375979	
2143840	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P375860	

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P376185

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P376186

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P375985

Component	Result	Code	Units
Iron	30	U	ug/L
Manganese	1.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P375985

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	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
Batch ID: P376393

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376406

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376408

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376425

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376427

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P376278

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P375916

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P375963

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P376333

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P375927

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P375856

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P375860

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P375746

Component	Result	Code	Units
Aldrin	4.0	U	ng/L
Alpha-BHC	2.0	U	ng/L
Alpha-Chlordane	1.0	U	ng/L
Beta-BHC	10	U	ng/L
Bifenthrin	4.0	U	ng/L
Carbophenothion	10	U	ng/L
Chlorothalonil	2.0	U	ng/L
Cis-Nonachlor	1.0	U	ng/L
Cypermethrin	20	U	ng/L
DDD-p,p'	6.0	U	ng/L
DDE-p,p'	6.0	U	ng/L
DDT-p,p'	7.0	U	ng/L
Delta-BHC	8.0	U	ng/L
Dicofol	30	U	ng/L
Dieldrin	4.0	U	ng/L
Endosulfan I	4.0	U	ng/L
Endosulfan II	4.0	U	ng/L
Endosulfan Sulfate	2.0	U	ng/L
Endrin	2.0	U	ng/L
Endrin Aldehyde	2.0	U	ng/L
Endrin Ketone	2.0	U	ng/L
Ethalfluralin	3.0	U	ng/L
Gamma-BHC	8.0	U	ng/L
Gamma-Chlordane	1.0	U	ng/L
Heptachlor	1.5	U	ng/L
Heptachlor Epoxide	2.0	U	ng/L
Hexachlorobenzene	2.0	U	ng/L
Methoxychlor	4.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Trans-Nonachlor	1.0	U	ng/L
Trifluralin	2.5	U	ng/L

Reference Method: EPA 8270E
Batch ID: P376091

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	5.0	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L
Cyanazine	3.2	U	ng/L
Demeton	7.0	U	ng/L
Diazinon	0.12	U	ng/L
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P376091

Component	Result	Code	Units
Dithiopyr	0.10	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.50	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.30	U	ng/L
Metolachlor	0.50	U	ng/L
Metribuzin	0.75	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.10	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8276
Batch ID: P375746

Component	Result	Code	Units
Chlordane	5.0	U	ng/L
Toxaphene	30	U	ng/L

Reference Method: EPA 8321B
Batch ID: P375695

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P375926

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: P375999

Component	Result	Code	Units
2,4-D	0.0020	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	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B
Batch ID: P375987

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P376259

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

Quality Assurance Report
Method Blank Results

Reference Method: SM 2540 C-97
Batch ID: P376416

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P376419

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P376356

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P376359

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P376362

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P376262

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P375979

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P375985

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	104		P	85 - 115
Manganese	104		P	85 - 115
Zinc	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P375985

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	97.7		P	85 - 115
Antimony	105		P	85 - 115
Arsenic	98.9		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	99.5		P	85 - 115
Copper	96.9		P	85 - 115
Lead	107		P	85 - 115
Nickel	97.5		P	85 - 115
Selenium	98.7		P	85 - 115
Silver	101		P	85 - 115
Thallium	103		P	85 - 115

Reference Method: EPA 300.0
Batch ID: P376393

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376406

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376408

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376425

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	97.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376427

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.8		P	90 - 110

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P376278

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P375916

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P375963

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	96.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P376333

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P375927

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P375856

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P375860

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

Reference Method: EPA 8270E
Batch ID: P375746

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	46.2	43.5	P/P	20 - 93.0
Alpha-BHC	69.3	69.5	P/P	55 - 133
Alpha-Chlordane	66.3	67.6	P/P	58 - 112
Beta-BHC	77.4	78.2	P/P	54 - 168
Bifenthrin	80.6	76.5	P/P	30 - 134
Carbophenothion	79.3	82.0	P/P	26 - 147
Chlorothalonil	94.2	95.3	P/P	20 - 155
Cis-Nonachlor	64.3	67.1	P/P	54 - 115
Cypermethrin	72.5	69.8	P/P	40 - 137
DDD-p,p'	72.0	75.4	P/P	65 - 129

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P375746

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
DDE-p,p'	64.7	68.0	P/P	57 - 116
DDT-p,p'	75.5	77.1	P/P	53 - 133
Delta-BHC	91.0	87.4	P/P	59 - 178
Dicofol	77.1	79.2	P/P	24 - 138
Dieldrin	69.3	71.4	P/P	60 - 120
Endosulfan I	71.2	77.9	P/P	64 - 118
Endosulfan II	74.4	85.9	P/P	58 - 142
Endosulfan Sulfate	78.7	78.8	P/P	60 - 127
Endrin	70.3	69.9	P/P	59 - 122
Endrin Aldehyde	71.9	77.5	P/P	49 - 132
Endrin Ketone	79.6	80.9	P/P	64 - 121
Ethalfluralin	66.8	68.2	P/P	60 - 126
Gamma-BHC	76.5	77.6	P/P	57 - 154
Gamma-Chlordane	62.3	63.1	P/P	56 - 110
Heptachlor	60.3	59.2	P/P	46 - 96.0
Heptachlor Epoxide	68.9	69.6	P/P	61 - 112
Hexachlorobenzene	59.9	61.5	P/P	44 - 98.0
Methoxychlor	86.7	87.9	P/P	63 - 134
Mirex	58.5	58.4	P/P	45 - 100
Permethrin	73.5	73.2	P/P	53 - 115
Trans-Nonachlor	60.4	63.3	P/P	47 - 110
Trifluralin	69.6	69.8	P/P	39 - 142

Reference Method: EPA 8270E
Batch ID: P376091

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	85.7	82.3	P/P	69 - 122
Alachlor	82.1	77.1	P/P	71 - 120
Ametryn	78.8	83.4	P/P	47 - 138
Atrazine	98.8	95.9	P/P	74 - 124
Atrazine Desethyl	119	99.8	P/P	38 - 138
Azinphos Methyl	99.9	94.9	P/P	69 - 154
Bromacil	66.8	70.4	P/P	39 - 121
Butylate	59.3	59.5	P/P	27 - 87.0
Chlorpyrifos Ethyl	90.5	84.6	P/P	69 - 118
Chlorpyrifos Methyl	93.2	86.5	P/P	70 - 120
Cyanazine	213	174	P/P	20 - 250
Demeton	81.8	73.3	P/P	39 - 118
Diazinon	93.4	88.9	P/P	68 - 127
Dimethenamid	84.8	82.1	P/P	66 - 125
Disulfoton	97.8	89.4	P/P	52 - 126
Dithiopyr	84.7	80.3	P/P	67 - 127
EPTC	54.7	59.1	P/P	24 - 88.0
Ethion	94.1	87.3	P/P	51 - 132
Ethoprop	92.3	86.1	P/P	58 - 117
Fenamiphos	57.0	72.3	P/P	38 - 139
Fipronil	76.9	78.0	P/P	61 - 124
Fipronil Desulfinyl	87.6	87.6	P/P	47 - 120
Fipronil Sulfide	84.6	80.5	P/P	56 - 119
Fipronil Sulfone	77.8	75.0	P/P	50 - 117
Fonofos	93.1	83.6	P/P	60 - 121

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P376091

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Hexazinone	93.0	88.7	P/P	55 - 137
Malathion	67.8	89.6	P/P	66 - 126
Metalaxyl	82.4	82.6	P/P	33 - 140
Metolachlor	80.8	80.0	P/P	69 - 119
Metribuzin	135	123	P/P	31 - 238
Mevinphos	84.0	79.5	P/P	42 - 113
Molinate	72.8	70.6	P/P	32 - 96.0
Norflurazon	85.1	86.0	P/P	54 - 123
Oxadiazon	81.7	76.2	P/P	63 - 128
Parathion Ethyl	95.1	86.0	P/P	72 - 111
Parathion Methyl	103	97.6	P/P	74 - 126
Pendimethalin	93.8	83.7	P/P	61 - 131
Phorate	91.5	79.5	P/P	51 - 115
Prodiamine	87.9	85.4	P/P	38 - 144
Prometon	75.3	62.1	P/P	54 - 119
Prometryn	85.4	83.7	P/P	63 - 120
Simazine	103	101	P/P	75 - 126
Tebuconazole	20.9	27.1	P/P	20 - 119
Terbufos	93.2	81.4	P/P	64 - 116
Terbuthylazine	90.8	87.6	P/P	73 - 117

Reference Method: EPA 8276
Batch ID: P375746

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	69.3	84.0	P/P	43 - 128
Toxaphene	83.8	82.7	P/P	38 - 140

Reference Method: EPA 8321B
Batch ID: P375695

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	70.2		P	40 - 160
Aldicarb	73.5		P	30 - 160
Aldicarb Sulfone	72.0		P	40 - 160
Aldicarb Sulfoxide	74.5		P	40 - 160
Carbaryl	70.9		P	40 - 160
Carbofuran	74.5		P	40 - 160
Methiocarb	69.6		P	40 - 160
Methomyl	69.4		P	40 - 160
Oxamyl	79.0		P	40 - 160
Propoxur	65.3		P	40 - 160

Reference Method: EPA 8321B
Batch ID: P375926

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	146		P	40 - 150
AMPA	95.8		P	40 - 150
Endothall	82.5		P	40 - 150
Glufosinate	95.3		P	40 - 150
Glyphosate	104		P	40 - 140

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P375926

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	92.4		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P375999

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	140		P	40 - 160
Acetaminophen	83.2		P	30 - 160
Acetamiprid	83.5		P	40 - 160
Afidopyropen	86.1		P	40 - 160
Bentazon	82.6		P	30 - 160
Benzovindiflupyr	96.2		P	40 - 160
Carbamazepine	98.8		P	40 - 160
Clothianidin	83.3		P	40 - 160
Dinotefuran	84.2		P	40 - 160
Diuron	95.1		P	40 - 160
Fenuron	97.7		P	40 - 160
Fluridone	102		P	40 - 160
Hydrocodone	97.4		P	40 - 160
Ibuprofen	78.6		P	30 - 160
Imazapyr	109		P	40 - 160
Imidacloprid	104		P	40 - 160
Linuron	82.9		P	40 - 160
Mandestrobin	106		P	40 - 160
MCPP	172		F	40 - 160
Naproxen	85.3		P	40 - 160
Primidone	98.5		P	40 - 160
Pyraclostrobin	105		P	30 - 160
Thiamethoxam	109		P	40 - 160
Tolfenpyrad	68.6		P	40 - 160
Triclopyr	89.3		P	30 - 160

Reference Method: SM 2120 B
Batch ID: P375987

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.6		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P376259

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P376262

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.8		P	92 - 103

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
Batch ID: P375979

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.3		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P375985

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143707	Iron	104	104	P/P	80 - 120
2143707	Manganese	102	102	P/P	80 - 120
2143707	Zinc	97.1	98.9	P/P	80 - 120
2144164	Iron	102		P	80 - 120
2144164	Manganese	102		P	80 - 120
2144164	Zinc	100		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P375985

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143707	Aluminum	94.3	91.9	P/P	80 - 120
2143707	Antimony	106	108	P/P	80 - 120
2143707	Arsenic	99.4	98.9	P/P	80 - 120
2143707	Cadmium	103	102	P/P	80 - 120
2143707	Chromium	103	102	P/P	80 - 120
2143707	Copper	91.4	90.3	P/P	80 - 120
2143707	Lead	109	109	P/P	80 - 120
2143707	Nickel	94.4	93.0	P/P	80 - 120
2143707	Selenium	93.3	92.4	P/P	80 - 120
2143707	Silver	101	102	P/P	80 - 120
2143707	Thallium	104	106	P/P	80 - 120
2144164	Aluminum	93.1		P	80 - 120
2144164	Antimony	107		P	80 - 120
2144164	Arsenic	99.9		P	80 - 120
2144164	Cadmium	103		P	80 - 120
2144164	Chromium	103		P	80 - 120
2144164	Copper	91.7		P	80 - 120
2144164	Lead	109		P	80 - 120
2144164	Nickel	93.5		P	80 - 120
2144164	Selenium	95.8		P	80 - 120
2144164	Silver	101		P	80 - 120
2144164	Thallium	105		P	80 - 120

Reference Method: EPA 300.0
Batch ID: P376393

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143832	Bromide	99.9	102	P/P	90 - 110
2143833	Bromide	99.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376406

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143349	Chloride	99.1		P	90 - 110
2144045	Chloride	98.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376408

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

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376408

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143349	Sulfate	99.4		P	90 - 110
2144045	Sulfate	99.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376425

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143399	Chloride	98.1		P	90 - 110
2143669	Chloride	98.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376427

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143399	Sulfate	98.6		P	90 - 110
2143669	Sulfate	98.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P376278

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143917	Ammonia-N	98.9	98.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P375916

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143835	Kjeldahl Nitrogen	102	108	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P375963

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143917	NO2NO3-N	97.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P376333

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2144813	NO2NO3-N	98.5	98.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P375927

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143697	Total-P	105	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P375856

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143671	O-Phosphate-P	94.5	96.2	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P375860

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2144140	O-Phosphate-P	98.5	97.5	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P375746

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143638	Aldrin	53.0	51.3	P/P	25 - 92.0
2143638	Alpha-BHC	92.7	87.5	P/P	48 - 150
2143638	Alpha-Chlordane	54.8	51.7	P/P	50 - 115
2143638	Beta-BHC	69.1	60.6	P/P	39 - 184
2143638	Bifenthrin	82.7	80.7	P/P	46 - 116
2143638	Carbophenothion	89.8	108	P/P	27 - 180
2143638	Chlorothalonil	144	143	P/P	10 - 216
2143638	Cis-Nonachlor	54.7	52.3	F/F	55 - 112
2143638	Cypermethrin	102	122	P/P	40 - 153
2143638	DDD-p,p'	60.1	59.7	P/P	53 - 128
2143638	DDE-p,p'	49.0	48.2	P/P	48 - 116
2143638	DDT-p,p'	66.3	66.6	P/P	47 - 128
2143638	Delta-BHC	67.3	62.4	P/P	48 - 221
2143638	Dicofol	52.9	54.3	P/P	10 - 147
2143638	Dieldrin	58.3	55.3	P/P	48 - 128
2143638	Endosulfan I	67.8	61.7	P/P	58 - 126
2143638	Endosulfan II	72.5	68.6	P/P	50 - 150
2143638	Endosulfan Sulfate	101	99.4	P/P	56 - 130
2143638	Endrin	56.3	52.8	P/P	50 - 126
2143638	Endrin Aldehyde	63.3	65.7	P/P	12 - 145
2143638	Endrin Ketone	88.3	87.1	P/P	59 - 132
2143638	Ethalfluralin	56.2	52.8	F/F	65 - 122
2143638	Gamma-BHC	95.6	89.8	P/P	40 - 190
2143638	Gamma-Chlordane	53.5	50.7	P/P	50 - 112
2143638	Heptachlor	61.3	60.2	P/P	41 - 98.0
2143638	Heptachlor Epoxide	60.5	57.5	P/P	55 - 117
2143638	Hexachlorobenzene	51.7	48.8	P/P	47 - 91.0
2143638	Methoxychlor	78.6	78.5	P/P	55 - 133
2143638	Mirex	54.3	50.5	P/P	44 - 101
2143638	Permethrin	85.3	94.1	P/P	52 - 124
2143638	Trans-Nonachlor	49.0	46.2	F/F	53 - 99.0
2143638	Trifluralin	61.6	58.6	P/P	10 - 201

Reference Method: EPA 8270E
Batch ID: P376091

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143866	Acetochlor	79.9	81.2	P/P	63 - 129
2143866	Alachlor	81.4	86.2	P/P	65 - 127
2143866	Ametryn	89.8	106	P/P	40 - 164
2143866	Atrazine Desethyl	116	120	P/P	14 - 157
2143866	Azinphos Methyl	81.0	60.7	P/P	49 - 180
2143866	Bromacil	68.9	67.6	P/P	48 - 130
2143866	Butylate	54.4	61.2	P/P	10 - 94.0
2143866	Chlorpyrifos Ethyl	102	103	P/P	58 - 123
2143866	Chlorpyrifos Methyl	85.8	80.4	P/P	58 - 125

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P376091

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143866	Cyanazine	191	202	P/P	24 - 253
2143866	Demeton	109	106	P/P	25 - 149
2143866	Diazinon	97.9	102	P/P	59 - 144
2143866	Dimethenamid	76.3	80.0	P/P	46 - 139
2143866	Disulfoton	98.5	98.5	P/P	54 - 132
2143866	Dithiopyr	79.0	81.3	P/P	64 - 130
2143866	EPTC	64.4	68.4	P/P	10 - 92.0
2143866	Ethion	69.8	64.1	P/P	30 - 148
2143866	Ethoprop	99.9	101	P/P	50 - 130
2143866	Fenamiphos	69.5	89.0	P/P	49 - 142
2143866	Fipronil	79.7	81.3	P/P	46 - 140
2143866	Fipronil Desulfinyl	86.1	87.9	P/P	30 - 121
2143866	Fipronil Sulfide	72.0	62.1	P/P	31 - 136
2143866	Fipronil Sulfone	43.6	30.7	P/P	16 - 136
2143866	Fonofos	95.2	92.1	P/P	55 - 129
2143866	Hexazinone	92.5	91.7	P/P	56 - 141
2143866	Malathion	98.9	90.7	P/P	56 - 135
2143866	Metalaxyl	80.5	78.3	P/P	54 - 135
2143866	Metolachlor	79.2	78.7	P/P	51 - 140
2143866	Metribuzin	161	148	P/P	45 - 254
2143866	Mevinphos	88.1	86.5	P/P	33 - 131
2143866	Molinate	71.1	75.0	P/P	14 - 98.0
2143866	Norflurazon	63.9	65.4	P/P	34 - 136
2143866	Oxadiazon	60.9	55.5	F/F	67 - 116
2143866	Parathion Ethyl	87.0	88.2	P/P	66 - 118
2143866	Parathion Methyl	108	110	P/P	64 - 136
2143866	Pendimethalin	87.2	87.9	P/P	59 - 144
2143866	Phorate	91.6	91.4	P/P	42 - 130
2143866	Prodiamine	85.1	86.0	P/P	42 - 148
2143866	Prometon	78.1	80.4	P/P	59 - 134
2143866	Prometryn	82.9	83.0	P/P	54 - 135
2143866	Simazine	115	116	P/P	53 - 156
2143866	Tebuconazole	4.84	6.51	F/F	10 - 131
2143866	Terbufos	97.6	97.1	P/P	57 - 131
2143866	Terbuthylazine	92.5	96.6	P/P	68 - 125

Reference Method: EPA 8276
Batch ID: P375746

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143864	Chlordane	90.8	71.6	P/P	34 - 136
2143864	Toxaphene	84.0	81.3	P/P	22 - 152

Reference Method: EPA 8321B
Batch ID: P375695

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143330	3-Hydroxycarbofuran	54.0	67.2	P/P	40 - 160
2143330	Aldicarb	34.6	57.3	P/P	30 - 160
2143330	Aldicarb Sulfone	82.9	74.7	P/P	40 - 160
2143330	Aldicarb Sulfoxide	37.7	42.8	F/P	40 - 160
2143330	Carbaryl	52.4	58.5	P/P	40 - 160

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P375695

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143330	Carbofuran	56.8	58.2	P/P	40 - 160
2143330	Methiocarb	57.0	67.9	P/P	40 - 160
2143330	Methomyl	63.5	64.2	P/P	40 - 160
2143330	Oxamyl	60.2	66.9	P/P	40 - 160
2143330	Propoxur	50.9	51.4	P/P	40 - 160

Reference Method: EPA 8321B
Batch ID: P375926

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143044	Acesulfame K	117	120	P/P	40 - 150
2143044	AMPA	102	101	P/P	40 - 150
2143044	Endothall	88.9	87.5	P/P	40 - 150
2143044	Glufosinate	108	87.3	P/P	40 - 150
2143044	Glyphosate	103	101	P/P	40 - 140
2143044	Sucralose	69.2	68.3	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P375999

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143857	Acetaminophen	45.1	97.8	P/P	30 - 160
2143857	Acetamiprid	112	80.8	P/P	40 - 160
2143857	Afidopyropen	110	65.4	P/P	40 - 160
2143857	Benzovindiflupyr	107	93.2	P/P	40 - 160
2143857	Carbamazepine	100	90.4	P/P	40 - 160
2143857	Clothianidin	111	108	P/P	40 - 160
2143857	Dinotefuran	55.7	117	P/P	40 - 160
2143857	Diuron	89.8	81.6	P/P	40 - 160
2143857	Fenuron	99.7	64.4	P/P	40 - 160
2143857	Hydrocodone	33.5	98.2	F/P	40 - 160
2143857	Ibuprofen	84.2	73.9	P/P	30 - 160
2143857	Imidacloprid	192	158	F/P	40 - 160
2143857	Linuron	77.0	77.9	P/P	40 - 160
2143857	Mandestrobin	112	98.0	P/P	40 - 160
2143857	MCPP	211	156	F/P	40 - 160
2143857	Naproxen	123	106	P/P	40 - 160
2143857	Primidone	104	96.1	P/P	40 - 160
2143857	Pyraclostrobin	123	105	P/P	30 - 160
2143857	Thiamethoxam	165	165	F/F	40 - 160
2143857	Tolfenpyrad	78.8	64.3	P/P	40 - 160
2143857	Triclopyr	161	106	F/P	30 - 160

Reference Method: SM 4500 F-C-97
Batch ID: P376262

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143923	Fluoride	98.0	99.1	P/P	89 - 106

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P375979

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2143902	Organic Carbon	94.4	94.6	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P376185

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143832	Turbidity	4.79	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P376186

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143829	Turbidity	1.27	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P375985

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143707	Iron	0.179	Spike	P	0 - 20
2143707	Manganese	0.249	Spike	P	0 - 20
2143707	Zinc	1.31	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P375985

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143707	Aluminum	2.57	Spike	P	0 - 20
2143707	Antimony	1.53	Spike	P	0 - 20
2143707	Arsenic	0.505	Spike	P	0 - 20
2143707	Cadmium	0.592	Spike	P	0 - 20
2143707	Chromium	1.44	Spike	P	0 - 20
2143707	Copper	1.16	Spike	P	0 - 20
2143707	Lead	0.103	Spike	P	0 - 20
2143707	Nickel	1.43	Spike	P	0 - 20
2143707	Selenium	0.861	Spike	P	0 - 20
2143707	Silver	1.20	Spike	P	0 - 20
2143707	Thallium	1.80	Spike	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P376393

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143832	Bromide	1.04	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376406

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143349	Chloride	0.133	Sample	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376408

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143349	Sulfate	0.0434	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376425

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143399	Chloride	0.308	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P376427

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143399	Sulfate	0.403	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P376278

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143917	Ammonia-N	0.539	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P375916

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143835	Kjeldahl Nitrogen	4.12	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P375963

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143917	NO2NO3-N	0.574	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P376333

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2144813	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P375927

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143697	Total-P	0.630	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P375856

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143671	O-Phosphate-P	1.59	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P375860

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2144140	O-Phosphate-P	0.544	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P375746

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143638	Aldrin	3.12	Spike	P	0 - 30
2143638	Alpha-BHC	5.80	Spike	P	0 - 30
2143638	Alpha-Chlordane	5.83	Spike	P	0 - 30
2143638	Beta-BHC	13.2	Spike	P	0 - 30
2143638	Bifenthrin	2.36	Spike	P	0 - 30
2143638	Carbophenothion	18.1	Spike	P	0 - 30
2143638	Chlorothalonil	0.525	Spike	P	0 - 30
2143638	Cis-Nonachlor	4.53	Spike	P	0 - 30
2143638	Cypermethrin	18.1	Spike	P	0 - 30
2143638	DDD-p,p'	0.682	Spike	P	0 - 30
2143638	DDE-p,p'	1.63	Spike	P	0 - 30
2143638	DDT-p,p'	0.437	Spike	P	0 - 30
2143638	Delta-BHC	7.50	Spike	P	0 - 30
2143638	Dicofol	2.54	Spike	P	0 - 30
2143638	Dieldrin	5.27	Spike	P	0 - 30
2143638	Endosulfan I	9.39	Spike	P	0 - 30
2143638	Endosulfan II	5.56	Spike	P	0 - 30
2143638	Endosulfan Sulfate	1.27	Spike	P	0 - 30
2143638	Endrin	6.44	Spike	P	0 - 30
2143638	Endrin Aldehyde	3.74	Spike	P	0 - 30
2143638	Endrin Ketone	1.28	Spike	P	0 - 30
2143638	Ethalfluralin	6.28	Spike	P	0 - 30
2143638	Gamma-BHC	6.24	Spike	P	0 - 30
2143638	Gamma-Chlordane	5.39	Spike	P	0 - 30
2143638	Heptachlor	1.73	Spike	P	0 - 30
2143638	Heptachlor Epoxide	5.04	Spike	P	0 - 30
2143638	Hexachlorobenzene	5.72	Spike	P	0 - 30
2143638	Methoxychlor	0.0995	Spike	P	0 - 30
2143638	Mirex	7.18	Spike	P	0 - 30
2143638	Permethrin	9.82	Spike	P	0 - 30
2143638	Trans-Nonachlor	5.96	Spike	P	0 - 30
2143638	Trifluralin	5.03	Spike	P	0 - 30
LFB	Aldrin	6.16	LCS	P	0 - 30
LFB	Alpha-BHC	0.306	LCS	P	0 - 30
LFB	Alpha-Chlordane	1.92	LCS	P	0 - 30
LFB	Beta-BHC	1.06	LCS	P	0 - 30
LFB	Bifenthrin	5.24	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P375746

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Carbophenothion	3.26	LCS	P	0 - 30
LFB	Chlorothalonil	1.09	LCS	P	0 - 30
LFB	Cis-Nonachlor	4.23	LCS	P	0 - 30
LFB	Cypermethrin	3.70	LCS	P	0 - 30
LFB	DDD-p,p'	4.57	LCS	P	0 - 30
LFB	DDE-p,p'	5.05	LCS	P	0 - 30
LFB	DDT-p,p'	2.02	LCS	P	0 - 30
LFB	Delta-BHC	4.06	LCS	P	0 - 30
LFB	Dicofol	2.63	LCS	P	0 - 30
LFB	Dieldrin	3.00	LCS	P	0 - 30
LFB	Endosulfan I	8.97	LCS	P	0 - 30
LFB	Endosulfan II	14.4	LCS	P	0 - 30
LFB	Endosulfan Sulfate	0.220	LCS	P	0 - 30
LFB	Endrin	0.511	LCS	P	0 - 30
LFB	Endrin Aldehyde	7.56	LCS	P	0 - 30
LFB	Endrin Ketone	1.60	LCS	P	0 - 30
LFB	Ethalfluralin	2.16	LCS	P	0 - 30
LFB	Gamma-BHC	1.32	LCS	P	0 - 30
LFB	Gamma-Chlordane	1.30	LCS	P	0 - 30
LFB	Heptachlor	1.75	LCS	P	0 - 30
LFB	Heptachlor Epoxide	0.924	LCS	P	0 - 30
LFB	Hexachlorobenzene	2.68	LCS	P	0 - 30
LFB	Methoxychlor	1.37	LCS	P	0 - 30
LFB	Mirex	0.0431	LCS	P	0 - 30
LFB	Permethrin	0.306	LCS	P	0 - 30
LFB	Trans-Nonachlor	4.67	LCS	P	0 - 30
LFB	Trifluralin	0.267	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P376091

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143866	Acetochlor	1.68	Spike	P	0 - 30
2143866	Alachlor	5.70	Spike	P	0 - 30
2143866	Ametryn	16.1	Spike	P	0 - 30
2143866	Atrazine	0.426	Spike	P	0 - 30
2143866	Atrazine Desethyl	2.10	Spike	P	0 - 30
2143866	Azinphos Methyl	28.8	Spike	P	0 - 30
2143866	Bromacil	1.86	Spike	P	0 - 30
2143866	Butylate	11.7	Spike	P	0 - 30
2143866	Chlorpyrifos Ethyl	0.995	Spike	P	0 - 30
2143866	Chlorpyrifos Methyl	6.44	Spike	P	0 - 30
2143866	Cyanazine	5.74	Spike	P	0 - 30
2143866	Demeton	2.61	Spike	P	0 - 30
2143866	Diazinon	4.39	Spike	P	0 - 30
2143866	Dimethenamid	4.78	Spike	P	0 - 30
2143866	Disulfoton	0.0241	Spike	P	0 - 30
2143866	Dithiopyr	2.86	Spike	P	0 - 30
2143866	EPTC	6.08	Spike	P	0 - 30
2143866	Ethion	8.49	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P376091

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143866	Ethoprop	0.967	Spike	P	0 - 30
2143866	Fenamiphos	24.5	Spike	P	0 - 30
2143866	Fipronil	0.979	Spike	P	0 - 30
2143866	Fipronil Desulfinyl	1.67	Spike	P	0 - 30
2143866	Fipronil Sulfide	9.16	Spike	P	0 - 30
2143866	Fipronil Sulfone	10.6	Spike	P	0 - 30
2143866	Fonofos	3.29	Spike	P	0 - 30
2143866	Hexazinone	0.662	Spike	P	0 - 30
2143866	Malathion	8.58	Spike	P	0 - 30
2143866	Metalaxyl	2.36	Spike	P	0 - 30
2143866	Metolachlor	0.630	Spike	P	0 - 30
2143866	Metribuzin	8.42	Spike	P	0 - 30
2143866	Mevinphos	1.78	Spike	P	0 - 30
2143866	Molinate	5.26	Spike	P	0 - 30
2143866	Norflurazon	2.26	Spike	P	0 - 30
2143866	Oxadiazon	5.40	Spike	P	0 - 30
2143866	Parathion Ethyl	1.39	Spike	P	0 - 30
2143866	Parathion Methyl	1.64	Spike	P	0 - 30
2143866	Pendimethalin	0.797	Spike	P	0 - 30
2143866	Phorate	0.145	Spike	P	0 - 30
2143866	Prodiamine	0.910	Spike	P	0 - 30
2143866	Prometon	2.89	Spike	P	0 - 30
2143866	Prometryn	0.120	Spike	P	0 - 30
2143866	Simazine	0.293	Spike	P	0 - 30
2143866	Tebuconazole	10.7	Spike	P	0 - 30
2143866	Terbufos	0.474	Spike	P	0 - 30
2143866	Terbuthylazine	4.37	Spike	P	0 - 30
LFB	Acetochlor	3.99	LCS	P	0 - 30
LFB	Alachlor	6.32	LCS	P	0 - 30
LFB	Ametryn	5.67	LCS	P	0 - 30
LFB	Atrazine	3.02	LCS	P	0 - 30
LFB	Atrazine Desethyl	17.2	LCS	P	0 - 30
LFB	Azinphos Methyl	5.10	LCS	P	0 - 30
LFB	Bromacil	5.29	LCS	P	0 - 30
LFB	Butylate	0.234	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	6.70	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	7.50	LCS	P	0 - 30
LFB	Cyanazine	20.1	LCS	P	0 - 30
LFB	Demeton	11.0	LCS	P	0 - 30
LFB	Diazinon	4.87	LCS	P	0 - 30
LFB	Dimethenamid	3.25	LCS	P	0 - 30
LFB	Disulfoton	8.87	LCS	P	0 - 30
LFB	Dithiopyr	5.36	LCS	P	0 - 30
LFB	EPTC	7.82	LCS	P	0 - 30
LFB	Ethion	7.43	LCS	P	0 - 30
LFB	Ethoprop	6.92	LCS	P	0 - 30
LFB	Fenamiphos	23.8	LCS	P	0 - 30
LFB	Fipronil	1.49	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	0.0243	LCS	P	0 - 30
LFB	Fipronil Sulfide	5.04	LCS	P	0 - 30
LFB	Fipronil Sulfone	3.70	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P376091

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Fonofos	10.7	LCS	P	0 - 30
LFB	Hexazinone	4.77	LCS	P	0 - 30
LFB	Malathion	27.8	LCS	P	0 - 30
LFB	Metalaxyl	0.202	LCS	P	0 - 30
LFB	Metolachlor	0.957	LCS	P	0 - 30
LFB	Metribuzin	9.79	LCS	P	0 - 30
LFB	Mevinphos	5.43	LCS	P	0 - 30
LFB	Molinate	3.10	LCS	P	0 - 30
LFB	Norflurazon	1.09	LCS	P	0 - 30
LFB	Oxadiazon	7.07	LCS	P	0 - 30
LFB	Parathion Ethyl	10.1	LCS	P	0 - 30
LFB	Parathion Methyl	5.71	LCS	P	0 - 30
LFB	Pendimethalin	11.4	LCS	P	0 - 30
LFB	Phorate	14.0	LCS	P	0 - 30
LFB	Prodiamine	2.91	LCS	P	0 - 30
LFB	Prometon	19.1	LCS	P	0 - 30
LFB	Prometryn	1.98	LCS	P	0 - 30
LFB	Simazine	1.73	LCS	P	0 - 30
LFB	Tebuconazole	25.6	LCS	P	0 - 30
LFB	Terbufos	13.6	LCS	P	0 - 30
LFB	Terbuthylazine	3.57	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P375746

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143864	Chlordane	23.7	Spike	P	0 - 30
2143864	Toxaphene	3.25	Spike	P	0 - 30
LFB	Chlordane	19.1	LCS	P	0 - 30
LFB	Toxaphene	1.26	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P375695

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143330	3-Hydroxycarbofuran	21.8	Spike	P	0 - 30
2143330	Aldicarb	49.2	Spike	F	0 - 30
2143330	Aldicarb Sulfone	10.5	Spike	P	0 - 30
2143330	Aldicarb Sulfoxide	12.7	Spike	P	0 - 30
2143330	Carbaryl	10.9	Spike	P	0 - 30
2143330	Carbofuran	2.33	Spike	P	0 - 30
2143330	Methiocarb	17.5	Spike	P	0 - 30
2143330	Methomyl	1.09	Spike	P	0 - 30
2143330	Oxamyl	10.5	Spike	P	0 - 30
2143330	Propoxur	0.915	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P375926

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143044	Acesulfame K	2.54	Spike	P	0 - 30
2143044	AMPA	0.966	Spike	P	0 - 30
2143044	Endothall	1.64	Spike	P	0 - 30
2143044	Glufosinate	21.5	Spike	P	0 - 30
2143044	Glyphosate	1.52	Spike	P	0 - 30
2143044	Sucralose	1.29	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P375999

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143857	2,4-D	29.6	Spike	P	0 - 30
2143857	Acetaminophen	73.8	Spike	F	0 - 30
2143857	Acetamiprid	32.0	Spike	F	0 - 30
2143857	Afidopyropen	51.2	Spike	F	0 - 30
2143857	Bentazon	18.5	Spike	P	0 - 30
2143857	Benzovindiflupyr	13.9	Spike	P	0 - 30
2143857	Carbamazepine	10.1	Spike	P	0 - 30
2143857	Clothianidin	2.80	Spike	P	0 - 30
2143857	Dinotefuran	71.0	Spike	F	0 - 30
2143857	Diuron	8.55	Spike	P	0 - 30
2143857	Fenuron	43.0	Spike	F	0 - 30
2143857	Fluridone	12.0	Spike	P	0 - 30
2143857	Hydrocodone	98.2	Spike	F	0 - 30
2143857	Ibuprofen	12.9	Spike	P	0 - 30
2143857	Imazapyr	5.84	Spike	P	0 - 30
2143857	Imidacloprid	15.4	Spike	P	0 - 30
2143857	Linuron	1.12	Spike	P	0 - 30
2143857	Mandestrobin	13.4	Spike	P	0 - 30
2143857	MCPP	28.7	Spike	P	0 - 30
2143857	Naproxen	15.0	Spike	P	0 - 30
2143857	Primidone	7.47	Spike	P	0 - 30
2143857	Pyraclostrobin	15.5	Spike	P	0 - 30
2143857	Thiamethoxam	0.0652	Spike	P	0 - 30
2143857	Tolfenpyrad	20.2	Spike	P	0 - 30
2143857	Triclopyr	40.9	Spike	F	0 - 30

Reference Method: SM 2120 B
Batch ID: P375987

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143669	Color (true)	1.79	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P376259

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143923	Total Alkalinity	0.576	Sample	P	0 - 2.8

Quality Assurance Report
Precision

Reference Method: SM 2540 C-97
Batch ID: P376416

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143239	TDS	5.88	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P376419

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143452	TDS	3.45	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P376262

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143923	Fluoride	0.963	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P375979

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2143902	Organic Carbon	0.117	Spike	P	0 - 20

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2143857
Field Sample ID: G4SE0038

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	144	P	30 - 160
EPA 8321B	Acetaminophen-d4	92.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	88.5	P	30 - 160
EPA 8321B	Diuron-d6	69.9	P	30 - 160
EPA 8321B	Endothall-d6	77.7	P	30 - 160
EPA 8321B	Endothall-d6	77.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	86.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	86.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	84.7	P	30 - 160
EPA 8321B	Primidone-d5	86.2	P	30 - 160
EPA 8321B	Sucralose-d6	101	P	30 - 160
EPA 8321B	Sucralose-d6	101	P	30 - 160

Lab Sample ID: 2143858
Field Sample ID: G4SE0085

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	61.3	P	30 - 160

Lab Sample ID: 2143859
Field Sample ID: G4SEB064

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	66.9	P	30 - 160

Lab Sample ID: 2143860
Field Sample ID: G4SE0085

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	121	P	30 - 160
EPA 8321B	Acetaminophen-d4	92.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	64.7	P	30 - 160
EPA 8321B	Diuron-d6	72.1	P	30 - 160
EPA 8321B	Endothall-d6	76.9	P	30 - 160
EPA 8321B	Endothall-d6	76.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	92.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	92.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	75.4	P	30 - 160
EPA 8321B	Primidone-d5	95.0	P	30 - 160
EPA 8321B	Sucralose-d6	99.2	P	30 - 160
EPA 8321B	Sucralose-d6	99.2	P	30 - 160

Lab Sample ID: 2143861
Field Sample ID: G4SEB064

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	124	P	30 - 160
EPA 8321B	Acetaminophen-d4	99.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	94.5	P	30 - 160
EPA 8321B	Diuron-d6	59.4	P	30 - 160
EPA 8321B	Endothall-d6	81.4	P	30 - 160
EPA 8321B	Endothall-d6	81.4	P	30 - 160

Quality Assurance Report
Surrogates

Lab Sample ID: 2143861
Field Sample ID: G4SEB064

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Glyphosate 13C 15N	85.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	85.7	P	30 - 160
EPA 8321B	Ibuprofen-d3	76.7	P	30 - 160
EPA 8321B	Primidone-d5	90.4	P	30 - 160
EPA 8321B	Sucralose-d6	99.2	P	30 - 160
EPA 8321B	Sucralose-d6	99.2	P	30 - 160

Lab Sample ID: 2143862
Field Sample ID: G4SE0113

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	144	P	30 - 160
EPA 8321B	Acetaminophen-d4	116	P	30 - 160
EPA 8321B	Carbamazepine-d10	103	P	30 - 160
EPA 8321B	Diuron-d6	80.1	P	30 - 160
EPA 8321B	Endothall-d6	288	F	30 - 160
EPA 8321B	Endothall-d6	288	F	30 - 160
EPA 8321B	Glyphosate 13C 15N	13.9	F	30 - 160
EPA 8321B	Glyphosate 13C 15N	13.9	F	30 - 160
EPA 8321B	Ibuprofen-d3	88.8	P	30 - 160
EPA 8321B	Primidone-d5	95.2	P	30 - 160
EPA 8321B	Sucralose-d6	92.2	P	30 - 160
EPA 8321B	Sucralose-d6	92.2	P	30 - 160

Lab Sample ID: 2143863
Field Sample ID: G4SE0121

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	139	P	30 - 160
EPA 8321B	Acetaminophen-d4	152	P	30 - 160
EPA 8321B	Carbamazepine-d10	113	P	30 - 160
EPA 8321B	Diuron-d6	112	P	30 - 160
EPA 8321B	Endothall-d6	485	F	30 - 160
EPA 8321B	Endothall-d6	485	F	30 - 160
EPA 8321B	Glyphosate 13C 15N	23.3	F	30 - 160
EPA 8321B	Glyphosate 13C 15N	23.3	F	30 - 160
EPA 8321B	Ibuprofen-d3	92.9	P	30 - 160
EPA 8321B	Primidone-d5	135	P	30 - 160
EPA 8321B	Sucralose-d6	94.8	P	30 - 160
EPA 8321B	Sucralose-d6	94.8	P	30 - 160

Lab Sample ID: 2143864
Field Sample ID: G4SE0085

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	58.0	P	43 - 111
EPA 8270E	Tetrachloro-m-xylene	42.2	P	35 - 106
EPA 8276	Decachlorobiphenyl	45.6	P	30 - 103
EPA 8276	PCNB	83.5	P	37 - 143

Quality Assurance Report
Surrogates

Lab Sample ID: 2143865
Field Sample ID: G4SEB064

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	43.8	P	43 - 111
EPA 8270E	Tetrachloro-m-xylene	36.1	P	35 - 106
EPA 8276	Decachlorobiphenyl	39.1	P	30 - 103
EPA 8276	PCNB	67.1	P	37 - 143

Lab Sample ID: 2143866
Field Sample ID: G4SE0085

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	116	P	68 - 130
EPA 8270E	Terbufos-d10	103	P	61 - 136

Lab Sample ID: 2143867
Field Sample ID: G4SEB064

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	117	P	68 - 130
EPA 8270E	Terbufos-d10	102	P	61 - 136

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A96350
Included Lab Sample IDs: 2143831, 2143836, 2143837, 2143840

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	103	96.5	P/P	90 - 110
O-Phosphate-P	95.3	96.0	P/P	90 - 110
O-Phosphate-P	98.0	103	P/P	90 - 110
O-Phosphate-P	99.1	97.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A96387
Included Lab Sample IDs: 2143830, 2143839

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

Reference Method: SM 5310 B-00
Run ID: A96393
Included Lab Sample IDs: 2143830, 2143834, 2143835, 2143839

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.6	97.4	P/P	90 - 110
Organic Carbon	97.4	94.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A96396
Included Lab Sample IDs: 2143830, 2143834, 2143835, 2143839

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

Reference Method: SM 2120 B
Run ID: A96397
Included Lab Sample IDs: 2143829, 2143838

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.8	98.8	P/P	90 - 115

Reference Method: EPA 8321B
Run ID: A96427
Included Lab Sample IDs: 2143857, 2143860, 2143861, 2143862, 2143863

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	79.3	79.8	P/P	60 - 160
Glufosinate	83.1	79.7	P/P	60 - 160
Glyphosate	122	114	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A96431
Included Lab Sample IDs: 2143834, 2143835

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A96439
Included Lab Sample IDs: 2143868, 2143869

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	102	102	P/P	90 - 110
Manganese	103	102	P/P	90 - 110
Zinc	102	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A96441
Included Lab Sample IDs: 2143830, 2143839

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.0	102	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A96468
Included Lab Sample IDs: 2143857, 2143860, 2143861, 2143862, 2143863

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	117	145	P/P	60 - 160
Acesulfame K	156	117	P/P	60 - 160
Endothall	83.1	97.0	P/P	60 - 160
Endothall	97.0	89.7	P/P	60 - 160

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A96479
Included Lab Sample IDs: 2143829, 2143832, 2143833, 2143838

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	100	P/P	95 - 105
Turbidity	99.5	100	P/P	95 - 105

Reference Method: SM 2320 B-97
Run ID: A96510
Included Lab Sample IDs: 2143829, 2143832, 2143833, 2143838

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	104	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A96510
Included Lab Sample IDs: 2143829, 2143832, 2143833, 2143838

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A96515
Included Lab Sample IDs: 2143830, 2143834, 2143835, 2143839

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.9	99.8	P/P	90 - 110
Ammonia-N	99.8	99.3	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8276
Run ID: A96518
Included Lab Sample IDs: 2143864, 2143865

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	92.9		P	80 - 120
Chlordane	95.4		P	80 - 120
Toxaphene	101		P	80 - 120
Toxaphene	97.6		P	80 - 120

Reference Method: EPA 8270E
Run ID: A96524
Included Lab Sample IDs: 2143864, 2143865

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	93.4		P	80 - 120
Alpha-BHC	101		P	80 - 120
Alpha-Chlordane	94.7		P	80 - 120
Beta-BHC	88.9		P	80 - 120
Bifenthrin	95.5		P	80 - 120
Carbophenothion	96.8		P	80 - 120
Chlorothalonil	98.8		P	80 - 120
Cis-Nonachlor	93.5		P	80 - 120
Cypermethrin	95.8		P	80 - 120
DDD-p,p'	97.2		P	80 - 120
DDE-p,p'	93.8		P	80 - 120
DDT-p,p'	101		P	80 - 120
Delta-BHC	98.8		P	80 - 120
Dicofol	103		P	80 - 120
Dieldrin	94.0		P	80 - 120
Endosulfan I	95.2		P	80 - 120
Endosulfan II	91.4		P	80 - 120
Endosulfan Sulfate	98.1		P	80 - 120
Endrin	94.2		P	80 - 120
Endrin Aldehyde	95.8		P	80 - 120
Endrin Ketone	98.7		P	80 - 120
Ethalfluralin	100		P	80 - 120
Gamma-BHC	102		P	80 - 120
Gamma-Chlordane	94.2		P	80 - 120
Heptachlor	93.9		P	80 - 120
Heptachlor Epoxide	94.3		P	80 - 120
Hexachlorobenzene	96.1		P	80 - 120
Methoxychlor	100		P	80 - 120
Mirex	98.8		P	80 - 120
Permethrin	92.4		P	80 - 120
Trans-Nonachlor	94.3		P	80 - 120
Trifluralin	101		P	80 - 120

Reference Method: EPA 8321B
Run ID: A96534
Included Lab Sample IDs: 2143857, 2143860, 2143861, 2143862, 2143863

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	95.8	99.2	P/P	60 - 160
Sucralose	96.4	95.8	P/P	60 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A96541
Included Lab Sample IDs: 2143834, 2143835

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.5	100	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A96565
Included Lab Sample IDs: 2143868, 2143869

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	93.6	95.9	P/P	90 - 110
Antimony	103	104	P/P	90 - 110
Arsenic	99.6	101	P/P	90 - 110
Cadmium	103	105	P/P	90 - 110
Chromium	107	109	P/P	90 - 110
Copper	96.5	97.7	P/P	90 - 110
Lead	105	106	P/P	90 - 110
Nickel	96.5	97.6	P/P	90 - 110
Selenium	102	105	P/P	90 - 110
Thallium	91.0	92.6	P/P	90 - 110

Reference Method: EPA 300.0
Run ID: A96567
Included Lab Sample IDs: 2143832, 2143833

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	101	105	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A96570
Included Lab Sample IDs: 2143838

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	96.9	97.0	P/P	90 - 110
Sulfate	97.8	97.9	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A96574
Included Lab Sample IDs: 2143829

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.8	98.9	P/P	90 - 110
Sulfate	100	99.4	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A96588
Included Lab Sample IDs: 2143857, 2143860, 2143861, 2143862, 2143863

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	104	87.4	P/P	50 - 150
2,4-D	90.2	106	P/P	50 - 150
3-Hydroxycarbofuran	90.1	99.8	P/P	60 - 150
Acetaminophen	108	107	P/P	60 - 160
Acetaminophen	151	147	P/P	60 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A96588
Included Lab Sample IDs: 2143857, 2143860, 2143861, 2143862, 2143863

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetamiprid	118	113	P/P	50 - 150
Acetamiprid	138	139	P/P	50 - 150
Afidopyropen	128	110	P/P	50 - 150
Afidopyropen	131	81.9	P/P	50 - 150
Aldicarb	70.8	94.2	P/P	60 - 150
Aldicarb Sulfone	89.5	94.2	P/P	50 - 150
Aldicarb Sulfoxide	78.2	87.8	P/P	50 - 150
Bentazon	81.6	82.7	P/P	50 - 160
Bentazon	97.4	66.9	P/P	50 - 160
Benzovindiflupyr	110	113	P/P	50 - 150
Benzovindiflupyr	122	118	P/P	50 - 150
Carbamazepine	114	106	P/P	60 - 150
Carbamazepine	127	128	P/P	60 - 150
Carbaryl	88.5	99.0	P/P	60 - 150
Carbofuran	98.5	95.0	P/P	50 - 150
Clothianidin	117	112	P/P	60 - 150
Clothianidin	97.5	102	P/P	60 - 150
Dinotefuran	100	96.0	P/P	50 - 150
Dinotefuran	138	129	P/P	50 - 150
Diuron	122	116	P/P	60 - 150
Diuron	142	136	P/P	60 - 150
Fenuron	110	112	P/P	60 - 150
Fenuron	139	113	P/P	60 - 150
Fluridone	118	118	P/P	60 - 160
Fluridone	125	118	P/P	60 - 160
Hydrocodone	103	106	P/P	60 - 150
Hydrocodone	143	124	P/P	60 - 150
Ibuprofen	111	113	P/P	50 - 160
Ibuprofen	118	118	P/P	50 - 160
Imazapyr	93.8	100	P/P	50 - 150
Imazapyr	99.8	118	P/P	50 - 150
Imidacloprid	100	105	P/P	60 - 150
Imidacloprid	122	129	P/P	60 - 150
Linuron	114	103	P/P	60 - 150
Linuron	122	87.6	P/P	60 - 150
Mandestrobin	120	121	P/P	50 - 150
Mandestrobin	125	120	P/P	50 - 150
MCPP	121	118	P/P	50 - 150
MCPP	91.6	94.7	P/P	50 - 150
Methiocarb	95.8	99.8	P/P	50 - 150
Methomyl	93.7	92.5	P/P	50 - 150
Naproxen	65.5	78.3	P/P	50 - 160
Naproxen	97.0	110	P/P	50 - 160
Oxamyl	73.5	96.8	P/P	50 - 150
Primidone	139	118	P/P	60 - 150
Primidone	97.8	100	P/P	60 - 150
Propoxur	88.8	107	P/P	50 - 150
Pyraclostrobin	125	120	P/P	60 - 150
Pyraclostrobin	127	123	P/P	60 - 150
Thiamethoxam	120	101	P/P	50 - 150
Thiamethoxam	130	135	P/P	50 - 150

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A96588
Included Lab Sample IDs: 2143857, 2143860, 2143861, 2143862, 2143863

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Tolfenpyrad	119	121	P/P	60 - 150
Tolfenpyrad	121	114	P/P	60 - 150
Triclopyr	121	107	P/P	50 - 150
Triclopyr	76.5	98.1	P/P	50 - 150

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A96610
Included Lab Sample IDs: 2143868, 2143869

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Silver	103	102	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A96660
Included Lab Sample IDs: 2143866, 2143867

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	102		P	80 - 120
Alachlor	103		P	80 - 120
Ametryn	98.6		P	80 - 120
Atrazine	100		P	80 - 120
Atrazine Desethyl	115		P	80 - 120
Azinphos Methyl	100		P	80 - 120
Bromacil	100		P	80 - 120
Butylate	99.8		P	80 - 120
Chlorpyrifos Ethyl	96.4		P	80 - 120
Chlorpyrifos Methyl	98.4		P	80 - 120
Cyanazine	111		P	80 - 120
Demeton	97.5		P	80 - 120
Diazinon	102		P	80 - 120
Dimethenamid	102		P	80 - 120
Disulfoton	103		P	80 - 120
Dithiopyr	101		P	80 - 120
EPTC	101		P	80 - 120
Ethion	96.3		P	80 - 120
Ethoprop	97.1		P	80 - 120
Fenamiphos	95.9		P	80 - 120
Fipronil	101		P	80 - 120
Fipronil Desulfinyl	98.9		P	80 - 120
Fipronil Sulfide	97.3		P	80 - 120
Fipronil Sulfone	98.0		P	80 - 120
Fonofos	99.2		P	80 - 120
Hexazinone	104		P	80 - 120
Malathion	101		P	80 - 120
Metalaxyl	100		P	80 - 120
Metolachlor	106		P	80 - 120
Metribuzin	107		P	80 - 120
Mevinphos	99.8		P	80 - 120
Molinate	99.8		P	80 - 120
Norflurazon	99.3		P	80 - 120
Oxadiazon	104		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A96660
Included Lab Sample IDs: 2143866, 2143867

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Parathion Ethyl	95.3		P	80 - 120
Parathion Methyl	99.0		P	80 - 120
Pendimethalin	95.3		P	80 - 120
Phorate	100		P	80 - 120
Prodiamine	93.2		P	80 - 120
Prometon	99.0		P	80 - 120
Prometryn	99.7		P	80 - 120
Simazine	102		P	80 - 120
Tebuconazole	101		P	80 - 120
Terbufos	98.6		P	80 - 120
Terbuthylazine	103		P	80 - 120

Reference Method: EPA 8270E
Run ID: A96664
Included Lab Sample IDs: 2143866

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Oxadiazon	98.7		P	80 - 120

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

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			Precision		
							LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							4.79	
	Turbidity							1.27	
EPA 200.7 Rev. 4.4	Iron	104		104	104	102			0.179
	Manganese	104		102	102	102			0.249
	Zinc	103		97.1	98.9	100			1.31
EPA 200.8 Rev. 5.4	Aluminum	97.7		94.3	91.9	93.1			2.57
	Antimony	105		106	108	107			1.53
	Arsenic	98.9		99.4	98.9	99.9			0.505
	Cadmium	103		103	102	103			0.592
	Chromium	99.5		103	102	103			1.44
	Copper	96.9		91.4	90.3	91.7			1.16
	Lead	107		109	109	109			0.103
	Nickel	97.5		94.4	93.0	93.5			1.43
	Selenium	98.7		93.3	92.4	95.8			0.861
	Silver	101		101	102	101			1.20
	Thallium	103		104	106	105			1.80
EPA 300.0	Bromide	103		99.9	102	99.4			1.04
EPA 300.0 Rev. 2.1	Chloride	98.6		99.1	98.9			0.133	
	Chloride	97.7		98.1	98.6			0.308	
	Sulfate	99.3		99.4	99.9			0.0434	
	Sulfate	97.8		98.6	98.2			0.403	
EPA 350.1 Rev. 2.0	Ammonia-N	99.0		98.9	98.2				0.539
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107		102	108				4.12
EPA 353.2 Rev. 2.0	NO2NO3-N	96.0		97.0					0.574
	NO2NO3-N	99.5		98.5	98.5				0.0
EPA 365.1 Rev. 2.0	Total-P	105		105	106				0.630
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.4		94.5	96.2				1.59
	O-Phosphate-P	99.8		98.5	97.5				0.544
EPA 8270E	Acetochlor	85.7	82.3	79.9	81.2		3.99		1.68
	Alachlor	82.1	77.1	81.4	86.2		6.32		5.70
	Aldrin	46.2	43.5	53.0	51.3		6.16		3.12
	Alpha-BHC	69.3	69.5	92.7	87.5		0.306		5.80
	Alpha-Chlordane	66.3	67.6	54.8	51.7		1.92		5.83
	Ametryn	78.8	83.4	89.8	106		5.67		16.1
	Atrazine	98.8	95.9				3.02		0.426
	Atrazine Desethyl	119	99.8	116	120		17.2		2.10
	Azinphos Methyl	99.9	94.9	81.0	60.7		5.10		28.8
	Beta-BHC	77.4	78.2	69.1	60.6		1.06		13.2
	Bifenthrin	80.6	76.5	82.7	80.7		5.24		2.36
	Bromacil	66.8	70.4	68.9	67.6		5.29		1.86
	Butylate	59.3	59.5	54.4	61.2		0.234		11.7
	Carbophenothion	79.3	82.0	89.8	108		3.26		18.1
	Chlorothalonil	94.2	95.3	144	143		1.09		0.525
	Chlorpyrifos Ethyl	90.5	84.6	102	103		6.70		0.995
	Chlorpyrifos Methyl	93.2	86.5	85.8	80.4		7.50		6.44
	Cis-Nonachlor	64.3	67.1	54.7	52.3		4.23		4.53
	Cyanazine	213	174	191	202		20.1		5.74
	Cypermethrin	72.5	69.8	102	122		3.70		18.1
	DDD-p,p'	72.0	75.4	60.1	59.7		4.57		0.682
	DDE-p,p'	64.7	68.0	49.0	48.2		5.05		1.63
	DDT-p,p'	75.5	77.1	66.3	66.6		2.02		0.437
	Delta-BHC	91.0	87.4	67.3	62.4		4.06		7.50
	Demeton	81.8	73.3	109	106		11.0		2.61
	Diazinon	93.4	88.9	97.9	102		4.87		4.39

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270E	Dicofol	77.1	79.2	52.9	54.3	2.63		2.54
	Dieldrin	69.3	71.4	58.3	55.3	3.00		5.27
	Dimethenamid	84.8	82.1	76.3	80.0	3.25		4.78
	Disulfoton	97.8	89.4	98.5	98.5	8.87		0.0241
	Dithiopyr	84.7	80.3	79.0	81.3	5.36		2.86
	Endosulfan I	71.2	77.9	67.8	61.7	8.97		9.39
	Endosulfan II	74.4	85.9	72.5	68.6	14.4		5.56
	Endosulfan Sulfate	78.7	78.8	101	99.4	0.220		1.27
	Endrin	70.3	69.9	56.3	52.8	0.511		6.44
	Endrin Aldehyde	71.9	77.5	63.3	65.7	7.56		3.74
	Endrin Ketone	79.6	80.9	88.3	87.1	1.60		1.28
	EPTC	54.7	59.1	64.4	68.4	7.82		6.08
	Ethalfluralin	66.8	68.2	56.2	52.8	2.16		6.28
	Ethion	94.1	87.3	69.8	64.1	7.43		8.49
	Ethoprop	92.3	86.1	99.9	101	6.92		0.967
	Fenamiphos	57.0	72.3	69.5	89.0	23.8		24.5
	Fipronil	76.9	78.0	79.7	81.3	1.49		0.979
	Fipronil Desulfinyl	87.6	87.6	86.1	87.9	0.0243		1.67
	Fipronil Sulfide	84.6	80.5	72.0	62.1	5.04		9.16
	Fipronil Sulfone	77.8	75.0	43.6	30.7	3.70		10.6
	Fonofos	93.1	83.6	95.2	92.1	10.7		3.29
	Gamma-BHC	76.5	77.6	95.6	89.8	1.32		6.24
	Gamma-Chlordane	62.3	63.1	53.5	50.7	1.30		5.39
	Heptachlor	60.3	59.2	61.3	60.2	1.75		1.73
	Heptachlor Epoxide	68.9	69.6	60.5	57.5	0.924		5.04
	Hexachlorobenzene	59.9	61.5	51.7	48.8	2.68		5.72
	Hexazinone	93.0	88.7	92.5	91.7	4.77		0.662
	Malathion	67.8	89.6	98.9	90.7	27.8		8.58
	Metalaxyl	82.4	82.6	80.5	78.3	0.202		2.36
	Methoxychlor	86.7	87.9	78.6	78.5	1.37		0.0995
	Metolachlor	80.8	80.0	79.2	78.7	0.957		0.630
	Metribuzin	135	123	161	148	9.79		8.42
	Mevinphos	84.0	79.5	88.1	86.5	5.43		1.78
	Mirex	58.5	58.4	54.3	50.5	0.0431		7.18
	Molinate	72.8	70.6	71.1	75.0	3.10		5.26
	Norflurazon	85.1	86.0	63.9	65.4	1.09		2.26
	Oxadiazon	81.7	76.2	60.9	55.5	7.07		5.40
	Parathion Ethyl	95.1	86.0	87.0	88.2	10.1		1.39
	Parathion Methyl	103	97.6	108	110	5.71		1.64
	Pendimethalin	93.8	83.7	87.2	87.9	11.4		0.797
	Permethrin	73.5	73.2	85.3	94.1	0.306		9.82
	Phorate	91.5	79.5	91.6	91.4	14.0		0.145
	Prodiamine	87.9	85.4	85.1	86.0	2.91		0.910
	Prometon	75.3	62.1	78.1	80.4	19.1		2.89
	Prometryn	85.4	83.7	82.9	83.0	1.98		0.120
	Simazine	103	101	115	116	1.73		0.293
	Tebuconazole	20.9	27.1	4.84	6.51	25.6		10.7
	Terbufos	93.2	81.4	97.6	97.1	13.6		0.474
	Terbuthylazine	90.8	87.6	92.5	96.6	3.57		4.37
	Trans-Nonachlor	60.4	63.3	49.0	46.2	4.67		5.96
	Trifluralin	69.6	69.8	61.6	58.6	0.267		5.03
EPA 8276	Chlordane	69.3	84.0	90.8	71.6	19.1		23.7
	Toxaphene	83.8	82.7	84.0	81.3	1.26		3.25
EPA 8321B	2,4-D	140						29.6

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8321B	3-Hydroxycarbofuran	70.2	54.0	67.2			21.8
	Acesulfame K	146	117	120			2.54
	Acetaminophen	83.2	45.1	97.8			73.8
	Acetamiprid	83.5	112	80.8			32.0
	Afidopyropen	86.1	110	65.4			51.2
	Aldicarb	73.5	34.6	57.3			49.2
	Aldicarb Sulfone	72.0	82.9	74.7			10.5
	Aldicarb Sulfoxide	74.5	37.7	42.8			12.7
	AMPA	95.8	102	101			0.966
	Bentazon	82.6					18.5
	Benzovindiflupyr	96.2	107	93.2			13.9
	Carbamazepine	98.8	100	90.4			10.1
	Carbaryl	70.9	52.4	58.5			10.9
	Carbofuran	74.5	56.8	58.2			2.33
	Clothianidin	83.3	111	108			2.80
	Dinotefuran	84.2	55.7	117			71.0
	Diuron	95.1	89.8	81.6			8.55
	Endothall	82.5	88.9	87.5			1.64
	Fenuron	97.7	99.7	64.4			43.0
	Fluridone	102					12.0
	Glufosinate	95.3	108	87.3			21.5
	Glyphosate	104	103	101			1.52
	Hydrocodone	97.4	33.5	98.2			98.2
	Ibuprofen	78.6	84.2	73.9			12.9
	Imazapyr	109					5.84
	Imidacloprid	104	192	158			15.4
	Linuron	82.9	77.0	77.9			1.12
	Mandestrobin	106	112	98.0			13.4
	MCPP	172	211	156			28.7
	Methiocarb	69.6	57.0	67.9			17.5
	Methomyl	69.4	63.5	64.2			1.09
	Naproxen	85.3	123	106			15.0
	Oxamyl	79.0	60.2	66.9			10.5
	Primidone	98.5	104	96.1			7.47
	Propoxur	65.3	50.9	51.4			0.915
	Pyraclostrobin	105	123	105			15.5
	Sucralose	92.4	69.2	68.3			1.29
	Thiamethoxam	109	165	165			0.0652
	Tolfenpyrad	68.6	78.8	64.3			20.2
	Triclopyr	89.3	161	106			40.9
SM 2120 B	Color (true)	99.6				1.79	
SM 2320 B-97	Total Alkalinity	103				0.576	
SM 2540 C-97	TDS					5.88	
	TDS					3.45	
SM 4500 F-C-97	Fluoride	98.8	98.0	99.1			0.963
SM 5310 B-00	Organic Carbon	94.3	94.4	94.6			0.117

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2143829, 2143832, 2143833, 2143838

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2143868, 2143869
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2143868, 2143869
EPA 300.0 / E31780	Bromide in aqueous matrices	2143832, 2143833
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2143829, 2143838
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2143829, 2143838
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2143830, 2143834, 2143835, 2143839
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2143830, 2143834, 2143835, 2143839
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2143830, 2143834, 2143835, 2143839
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2143830, 2143834, 2143835, 2143839
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2143831, 2143836, 2143837, 2143840
EPA 8270E / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	2143864, 2143865
EPA 8270E / E31780	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2143866, 2143867
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2143864, 2143865
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	2143858, 2143859
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2143857, 2143860, 2143861, 2143862, 2143863
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2143857, 2143860, 2143861, 2143862, 2143863
SM 2120 B / E31780	True Color measured at 450 nm	2143829, 2143838
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2143829, 2143832, 2143833, 2143838
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2143829, 2143838
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2143829, 2143832, 2143833, 2143838
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2143829, 2143832, 2143833, 2143838
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2143830, 2143834, 2143835, 2143839

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	12/13/2019			12/13/2019 17:27	Yen Ta	2143829, 2143832, 2143833, 2143838
EPA 200.7 Rev. 4.4	12/13/2019	12/17/2019 15:50	Elliott D. Healy	12/18/2019 15:07	Betina Topolski	2143868
	12/13/2019	12/17/2019 15:50	Elliott D. Healy	12/18/2019 15:15	Betina Topolski	2143869
EPA 200.8 Rev. 5.4	12/13/2019	12/17/2019 15:50	Elliott D. Healy	12/24/2019 01:45	Justin Cutchin	2143868
	12/13/2019	12/17/2019 15:50	Elliott D. Healy	12/24/2019 01:55	Justin Cutchin	2143869
	12/13/2019	12/17/2019 15:50	Elliott D. Healy	12/27/2019 18:06	Alexander Thompson	2143868
	12/13/2019	12/17/2019 15:50	Elliott D. Healy	12/27/2019 18:15	Alexander Thompson	2143869
EPA 300.0	12/13/2019			12/23/2019 22:52	Jhamieka S. Greenwood	2143832
	12/13/2019			12/23/2019 23:44	Jhamieka S. Greenwood	2143833
EPA 300.0 Rev. 2.1	12/13/2019			12/24/2019 04:56	Jhamieka S. Greenwood	2143829
	12/13/2019			12/25/2019 01:41	Jhamieka S. Greenwood	2143838
EPA 350.1 Rev. 2.0	12/13/2019			12/18/2019 12:46	Ping Hua	2143830
	12/13/2019			12/18/2019 12:48	Ping Hua	2143834
	12/13/2019			12/18/2019 12:49	Ping Hua	2143835
	12/13/2019			12/18/2019 13:01	Ping Hua	2143839
EPA 351.2 Rev. 2.0	12/13/2019	12/16/2019 12:58	Sima Feizi	12/17/2019 16:04	Jhamieka S. Greenwood	2143835
	12/13/2019	12/16/2019 12:58	Sima Feizi	12/17/2019 16:18	Jhamieka S. Greenwood	2143830
	12/13/2019	12/16/2019 12:58	Sima Feizi	12/17/2019 16:19	Jhamieka S. Greenwood	2143834
	12/13/2019	12/16/2019 12:58	Sima Feizi	12/17/2019 16:21	Jhamieka S. Greenwood	2143839
EPA 353.2 Rev. 2.0	12/13/2019			12/17/2019 10:31	Beverly Y. Sanders	2143830
	12/13/2019			12/17/2019 10:33	Beverly Y. Sanders	2143839
	12/13/2019			12/23/2019 10:42	Beverly Y. Sanders	2143834
	12/13/2019			12/23/2019 10:43	Beverly Y. Sanders	2143835
EPA 365.1 Rev. 2.0	12/13/2019	12/16/2019 14:17	Yen Ta	12/17/2019 14:58	Benjamin T. Nordmann	2143834, 2143835
	12/13/2019	12/16/2019 14:17	Yen Ta	12/18/2019 15:48	Benjamin T. Nordmann	2143839
	12/13/2019	12/16/2019 14:17	Yen Ta	12/18/2019 15:51	Benjamin T. Nordmann	2143830
EPA 365.1 Rev. 2.0 dissolved	12/13/2019			12/13/2019 18:23	Samantha Davila	2143831
	12/13/2019			12/13/2019 18:53	Samantha Davila	2143840
	12/13/2019			12/13/2019 19:00	Samantha Davila	2143837
	12/13/2019			12/13/2019 19:24	Samantha Davila	2143836
EPA 8270E	12/13/2019	12/18/2019 09:00	Fe-Val Siddell	12/21/2019 01:36	Arthur Maknenko	2143864
	12/13/2019	12/18/2019 09:00	Fe-Val Siddell	12/21/2019 02:07	Arthur Maknenko	2143865
	12/13/2019	12/19/2019 09:00	Julie Wi	12/23/2019 14:53	Vandana T. Nagar	2143866
	12/13/2019	12/19/2019 09:00	Julie Wi	12/23/2019 15:19	Vandana T. Nagar	2143867
	12/13/2019	12/19/2019 09:00	Julie Wi	12/26/2019 20:39	Vandana T. Nagar	2143866
EPA 8276	12/13/2019	12/18/2019 09:00	Fe-Val Siddell	12/20/2019 22:27	Michael Poppell	2143864
	12/13/2019	12/18/2019 09:00	Fe-Val Siddell	12/21/2019 04:54	Michael Poppell	2143865
EPA 8321B	12/13/2019	12/17/2019 09:45	Rebecca Ware	12/17/2019 20:56	Rebecca Ware	2143857
	12/13/2019	12/17/2019 09:45	Rebecca Ware	12/17/2019 21:07	Rebecca Ware	2143860
	12/13/2019	12/17/2019 09:45	Rebecca Ware	12/17/2019 21:18	Rebecca Ware	2143861

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	12/13/2019	12/17/2019 09:45	Rebecca Ware	12/17/2019 21:29	Rebecca Ware	2143862
	12/13/2019	12/17/2019 09:45	Rebecca Ware	12/17/2019 21:39	Rebecca Ware	2143863
	12/13/2019	12/17/2019 09:45	Rebecca Ware	12/18/2019 11:07	Rebecca Ware	2143857
	12/13/2019	12/17/2019 09:45	Rebecca Ware	12/18/2019 11:21	Rebecca Ware	2143860
	12/13/2019	12/17/2019 09:45	Rebecca Ware	12/18/2019 11:34	Rebecca Ware	2143861
	12/13/2019	12/17/2019 09:45	Rebecca Ware	12/18/2019 11:48	Rebecca Ware	2143862
	12/13/2019	12/17/2019 09:45	Rebecca Ware	12/18/2019 12:42	Rebecca Ware	2143863
	12/13/2019	12/17/2019 09:45	Rebecca Ware	12/23/2019 20:33	Mohammad Ghaffari	2143857
	12/13/2019	12/17/2019 09:45	Rebecca Ware	12/23/2019 20:47	Mohammad Ghaffari	2143860
	12/13/2019	12/17/2019 09:45	Rebecca Ware	12/23/2019 21:01	Mohammad Ghaffari	2143861
	12/13/2019	12/17/2019 09:45	Rebecca Ware	12/23/2019 21:15	Mohammad Ghaffari	2143862
	12/13/2019	12/17/2019 09:45	Rebecca Ware	12/23/2019 21:43	Mohammad Ghaffari	2143863
	12/13/2019	12/18/2019 09:00	Hoor Shaik	12/24/2019 03:02	Juyoung Kim	2143858
	12/13/2019	12/18/2019 09:00	Hoor Shaik	12/24/2019 03:37	Juyoung Kim	2143859
	12/13/2019	12/18/2019 11:00	Hoor Shaik	12/24/2019 20:56	Juyoung Kim	2143863
	12/13/2019	12/18/2019 11:00	Hoor Shaik	12/26/2019 20:32	Juyoung Kim	2143857
	12/13/2019	12/18/2019 11:00	Hoor Shaik	12/26/2019 21:06	Juyoung Kim	2143860
	12/13/2019	12/18/2019 11:00	Hoor Shaik	12/26/2019 21:41	Juyoung Kim	2143861
	12/13/2019	12/18/2019 11:00	Hoor Shaik	12/26/2019 22:16	Juyoung Kim	2143862
SM 2120 B	12/13/2019			12/13/2019 18:35	Madeline Funaro	2143829
	12/13/2019			12/13/2019 18:36	Madeline Funaro	2143838
SM 2320 B-97	12/13/2019			12/19/2019 05:07	Dale L. Simmons	2143829
	12/13/2019			12/19/2019 05:20	Dale L. Simmons	2143832
	12/13/2019			12/19/2019 05:33	Dale L. Simmons	2143833
	12/13/2019			12/19/2019 05:48	Dale L. Simmons	2143838
SM 2540 C-97	12/13/2019			12/17/2019 16:36	Yijie Li	2143829, 2143838
SM 2540 D-97	12/13/2019			12/17/2019 16:36	Yijie Li	2143829, 2143832, 2143833, 2143838
SM 4500 F-C-97	12/13/2019			12/19/2019 05:07	Dale L. Simmons	2143829
	12/13/2019			12/19/2019 05:20	Dale L. Simmons	2143832
	12/13/2019			12/19/2019 05:33	Dale L. Simmons	2143833
	12/13/2019			12/19/2019 05:48	Dale L. Simmons	2143838
SM 5310 B-00	12/13/2019			12/17/2019 06:33	Madeline Funaro	2143830
	12/13/2019			12/17/2019 06:46	Madeline Funaro	2143834
	12/13/2019			12/17/2019 06:59	Madeline Funaro	2143835
	12/13/2019			12/17/2019 07:42	Madeline Funaro	2143839