Chemical Analysis Report

NW-DIST-2019-07-09-02

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

Event Description: **PENS/CANT RUN**
Request ID: **RQ-2019-07-08-32**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 208
Pensacola, FL 32502-5794
Attn: Cheryl Bunch

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

Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator Date Certified: 31-JUL-2019 10:40

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: Jones Creek upstream of N Navy Blvd **Collection Date/Time: 07/08/2019 09:15**

Field ID: G4NW0429 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2100785	EPA 180.1 Rev. 2.0	Turbidity	3.2		NTU	P366913	
	EPA 300.0 Rev. 2.1	Chloride	11		mg Cl/L	P367011	
		Sulfate	21		mg SO4/L	P367013	
	SM 2120 B	Color (true)	28	A	PCU	P366901	
	SM 2320 B-97	Total Alkalinity	5.6		mg CaCO3/L	P367072	
	SM 2540 C-97	TDS	61		mg/L	P367311	
	SM 2540 D-97	TSS	2	I	mg/L	P367318	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P367074	
2100786	EPA 350.1 Rev. 2.0	Ammonia-N	0.064		mg N/L	P367004	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.30		mg N/L	P366959	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.058		mg N/L	P366950	
	EPA 365.1 Rev. 2.0	Total-P	0.01		mg P/L	P366955	
	SM 5310 B-00	Organic Carbon	4.1		mg C/L	P367017	
2100787	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P366906	
2100830	EPA 8321B	2,4-D	0.0076	I	ug/L	P366930	
		Acesulfame K**	0.13	I	ug/L	P367009	
		AMPA**	0.10	U	ug/L	P367009	
		Sucralose**	0.35		ug/L	P367009	
		Acetaminophen**	0.0080	U	ug/L	P366930	
		Endothall**	0.25	U	ug/L	P367009	
		Acetamiprid**	0.0020	UJ	ug/L	P366930	
		Glufosinate**	0.10	U	ug/L	P367009	
		Glyphosate**	0.10	U	ug/L	P367009	
		Afidopyropen**	0.0020	UJ	ug/L	P366930	
		Bentazon	0.017		ug/L	P366930	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P366930	
		Carbamazepine**	8.0E-04	U	ug/L	P366930	
		Clothianidin**	0.0020	UJ	ug/L	P366930	
		Dinotefuran**	0.0020	UJ	ug/L	P366930	
		Diuron	0.0020	U	ug/L	P366930	
		Fenuron	0.022	I	ug/L	P366930	
		Fluridone**	8.0E-04	U	ug/L	P366930	
		Imazapyr**	0.0040	U	ug/L	P366930	
		Hydrocodone**	0.0020	U	ug/L	P366930	
		Ibuprofen**	0.020	U	ug/L	P366930	
		Imidacloprid	0.0056	I	ug/L	P366930	MS
		Linuron	0.0040	U	ug/L	P366930	
		Mandestrobin**	0.0020	UJ	ug/L	P366930	
		MCPP	0.031		ug/L	P366930	MS
		Naproxen**	0.0080	U	ug/L	P366930	
		Primidone**	0.038		ug/L	P366930	
		Pyraclostrobin**	0.0020	U	ug/L	P366930	
		Thiamethoxam**	0.0020	UJ	ug/L	P366930	

Field ID: G4NW0429 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2100830	EPA 8321B	Tolfenpyrad**	0.0020	UJ	ug/L	P366930	
		Triclopyr**	0.0040	U	ug/L	P366930	

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: MS accuracy for imazapyr could not be assessed due to high concentration of parameter in the spiked sample. J - second source check standards for some analytes were not available for analysis.

Sample Location: Jackson Creek upstream of Old Corry Field Road **Collection Date/Time: 07/08/2019 09:30**

Field ID: G4NW0430 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2100831	EPA 8321B	2,4-D	0.0020	U	ug/L	P366930	
		Acesulfame K**	0.10	U	ug/L	P367009	
		AMPA**	0.10	U	ug/L	P367009	
		Sucralose**	3.8		ug/L	P367009	
		Acetaminophen**	0.0080	U	ug/L	P366930	
		Endothall**	0.25	U	ug/L	P367009	
		Acetamiprid**	0.0020	UJ	ug/L	P366930	
		Glufosinate**	0.10	U	ug/L	P367009	
		Glyphosate**	0.10	U	ug/L	P367009	
		Afidopyropen**	0.0020	UJ	ug/L	P366930	
		Bentazon	0.054		ug/L	P366930	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P366930	
		Carbamazepine**	0.045		ug/L	P366930	
		Clothianidin**	0.0026	IJ	ug/L	P366930	
		Dinotefuran**	0.0020	UJ	ug/L	P366930	
		Diuron	0.0028	I	ug/L	P366930	
		Fenuron	0.034	I	ug/L	P366930	
		Fluridone**	8.0E-04	U	ug/L	P366930	
		Imazapyr**	0.014	I	ug/L	P366930	
		Hydrocodone**	0.0020	U	ug/L	P366930	
		Ibuprofen**	0.020	U	ug/L	P366930	
		Imidacloprid	0.042		ug/L	P366930	MS
		Linuron	0.0040	U	ug/L	P366930	
		Mandestrobin**	0.0020	UJ	ug/L	P366930	
		MCPP	0.0020	U	ug/L	P366930	MS
		Naproxen**	0.0080	U	ug/L	P366930	
		Primidone**	0.0040	U	ug/L	P366930	
		Pyraclostrobin**	0.0020	U	ug/L	P366930	
		Thiamethoxam**	0.0020	UJ	ug/L	P366930	
		Tolfenpyrad**	0.0020	UJ	ug/L	P366930	
		Triclopyr**	0.0040	U	ug/L	P366930	

Ref. Method and Comment:
EPA 8321B: MS accuracy for imazapyr could not be assessed due to high concentration of parameter in the spiked sample. J - second source check standards for some analytes were not available for analysis.

Sample Location: Carpenter Creek upstream of 9th Avenue **Collection Date/Time: 07/08/2019 10:00**

Field ID: G4NW0415 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2100782	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P366913	
	EPA 300.0 Rev. 2.1	Chloride	8.3		mg Cl/L	P367011	
		Sulfate	5.3		mg SO4/L	P367013	
	SM 2120 B	Color (true)	13		PCU	P366901	
	SM 2320 B-97	Total Alkalinity	24		mg CaCO3/L	P367072	
	SM 2540 C-97	TDS	54		mg/L	P367311	
	SM 2540 D-97	TSS	2	U	mg/L	P367318	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P367074	
2100783	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P367004	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.15	I	mg N/L	P366959	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.1		mg N/L	P366950	
	EPA 365.1 Rev. 2.0	Total-P	0.008		mg P/L	P366955	
	SM 5310 B-00	Organic Carbon	1.6		mg C/L	P367017	
2100784	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P366906	
2100828	EPA 8321B	Aldicarb	0.020	U	ug/L	P366931	
		Aldicarb Sulfone	0.0020	U	ug/L	P366931	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P366931	
		Carbaryl	0.0020	U	ug/L	P366931	
		Carbofuran	0.0020	U	ug/L	P366931	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P366931	
		Methiocarb	0.0020	U	ug/L	P366931	
		Methomyl	0.0020	U	ug/L	P366931	
		Oxamyl	0.0020	U	ug/L	P366931	RPD
		Propoxur	0.0020	U	ug/L	P366931	
2100829		2,4-D	0.0020	U	ug/L	P366930	
		Acesulfame K**	0.10	U	ug/L	P367009	
		AMPA**	0.10	U	ug/L	P367009	
		Sucralose**	0.12		ug/L	P367009	
		Acetaminophen**	0.0080	U	ug/L	P366930	
		Endothall**	0.25	U	ug/L	P367009	
		Acetamiprid**	0.0020	UJ	ug/L	P366930	
		Glufosinate**	0.10	U	ug/L	P367009	
		Glyphosate**	0.10	U	ug/L	P367009	
		Afidopyropen**	0.0020	UJ	ug/L	P366930	
		Bentazon	0.0011	I	ug/L	P366930	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P366930	
		Carbamazepine**	0.0028	I	ug/L	P366930	
		Clothianidin**	0.0020	UJ	ug/L	P366930	
		Dinotefuran**	0.0020	UJ	ug/L	P366930	
		Diuron	0.0023	I	ug/L	P366930	
		Fenuron	0.022	I	ug/L	P366930	
		Fluridone**	8.0E-04	U	ug/L	P366930	
		Imazapyr**	0.0095	I	ug/L	P366930	

Field ID: G4NW0415 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2100829	EPA 8321B	Hydrocodone**	0.0020	U	ug/L	P366930	
		Ibuprofen**	0.020	U	ug/L	P366930	
		Imidacloprid	0.045		ug/L	P366930	MS
		Linuron	0.0040	U	ug/L	P366930	
		Mandestrobin**	0.0020	UJ	ug/L	P366930	
		MCPP	0.0020	U	ug/L	P366930	MS
		Naproxen**	0.0080	U	ug/L	P366930	
		Primidone**	0.0040	U	ug/L	P366930	
		Pyraclostrobin**	0.0020	U	ug/L	P366930	
		Thiamethoxam**	0.0020	UJ	ug/L	P366930	
		Tolfenpyrad**	0.0020	UJ	ug/L	P366930	
		Triclopyr**	0.0040	U	ug/L	P366930	
2100832	EPA 8270E	Aldrin	4.4	U	ng/L	P366942	
		Alpha-BHC	2.2	UJ	ng/L	P366942	LCS
		Alpha-Chlordane	1.1	U	ng/L	P366942	
		Beta-BHC	11	U	ng/L	P366942	MS
		Bifenthrin**	4.4	U	ng/L	P366942	
		Delta-BHC	8.8	U	ng/L	P366942	
		Gamma-BHC	8.8	U	ng/L	P366942	
		Carbophenothion	11	U	ng/L	P366942	
		Chlorothalonil	2.2	U	ng/L	P366942	
		Cis-Nonachlor**	1.1	U	ng/L	P366942	
		Cypermethrin	22	U	ng/L	P366942	
		DDD-p,p'	6.6	U	ng/L	P366942	
		DDE-p,p'	6.6	U	ng/L	P366942	
		DDT-p,p'	7.7	U	ng/L	P366942	
		Dicofol	33	U	ng/L	P366942	
		Dieldrin	4.4	U	ng/L	P366942	
		Endosulfan I	4.4	U	ng/L	P366942	
		Endosulfan II	4.4	U	ng/L	P366942	
		Endosulfan Sulfate	2.2	U	ng/L	P366942	
		Endrin	2.2	U	ng/L	P366942	
		Endrin Aldehyde	2.2	U	ng/L	P366942	
		Endrin Ketone	2.2	U	ng/L	P366942	
		Ethalfluralin**	3.3	U	ng/L	P366942	
		Gamma-Chlordane	1.1	U	ng/L	P366942	
		Heptachlor	1.7	U	ng/L	P366942	
		Heptachlor Epoxide	4.9	I	ng/L	P366942	
		Hexachlorobenzene**	2.2	U	ng/L	P366942	
		Methoxychlor	4.4	U	ng/L	P366942	
		Mirex	2.2	U	ng/L	P366942	
		Permethrin	11	U	ng/L	P366942	
		Trans-Nonachlor**	1.1	U	ng/L	P366942	
		Trifluralin	2.8	U	ng/L	P366942	
	EPA 8276	Chlordane	5.5	U	ng/L	P366942	

Field ID: G4NW0415 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2100832	EPA 8276	Toxaphene	33	U	ng/L	P366942	
2100833	EPA 8270E	Acetochlor	0.27	U	ng/L	P367025	
		Alachlor	0.27	U	ng/L	P367025	
		Ametryn	0.64	U	ng/L	P367025	
		Atrazine	16		ng/L	P367025	
		Atrazine Desethyl	11	V	ng/L	P367025	
		Azinphos Methyl	5.4	U	ng/L	P367025	
		Bromacil	9.0		ng/L	P367025	
		Butylate	0.43	U	ng/L	P367025	
		Chlorpyrifos Ethyl	0.27	U	ng/L	P367025	
		Chlorpyrifos Methyl	0.11	U	ng/L	P367025	
		Cyanazine	3.5	U	ng/L	P367025	
		Demeton	7.5	UJ	ng/L	P367025	RPD
		Diazinon	0.13	U	ng/L	P367025	
		Dimethenamid**	0.11	U	ng/L	P367025	
		Disulfoton	0.54	UJ	ng/L	P367025	RPD
		Dithiopyr**	0.22	I	ng/L	P367025	
		EPTC	1.3	U	ng/L	P367025	
		Ethion	0.16	U	ng/L	P367025	
		Ethoprop	0.11	U	ng/L	P367025	
		Fenamiphos	0.54	U	ng/L	P367025	
		Fipronil	2.4		ng/L	P367025	
		Fipronil Desulfinyl**	0.31	I	ng/L	P367025	
		Fipronil Sulfide	0.65		ng/L	P367025	
		Fipronil Sulfone	5.2		ng/L	P367025	
		Fonofos	0.21	U	ng/L	P367025	
		Hexazinone	0.54	U	ng/L	P367025	
		Malathion	0.37	U	ng/L	P367025	
		Metalaxyl	0.32	U	ng/L	P367025	
		Metolachlor	0.71	I	ng/L	P367025	
		Metribuzin	0.80	U	ng/L	P367025	
		Mevinphos	0.54	U	ng/L	P367025	
		Molinate	0.32	U	ng/L	P367025	
		Norflurazon	0.54	U	ng/L	P367025	
		Oxadiazon**	0.11	U	ng/L	P367025	
		Parathion Ethyl	0.27	U	ng/L	P367025	
		Parathion Methyl	0.59	U	ng/L	P367025	
		Pendimethalin	1.1	U	ng/L	P367025	
		Phorate	0.27	U	ng/L	P367025	
		Prodiamine**	0.19	U	ng/L	P367025	
		Prometon	1.7	I	ng/L	P367025	
		Prometryn	0.21	U	ng/L	P367025	
		Simazine	3.7		ng/L	P367025	
		Tebuconazole**	0.54	U	ng/L	P367025	RPD
		Terbufos	0.11	U	ng/L	P367025	

Field ID: G4NW0415 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2100833	EPA 8270E	Terbuthylazine	1.7	I	ng/L	P367025	
2100834	EPA 200.7 Rev. 4.4	Barium	27.2		ug/L	P366893	
		Calcium	8.75		mg/L	P366893	
		Iron	350		ug/L	P366893	
		Magnesium	2.02		mg/L	P366893	
		Potassium	0.82	I	mg/L	P366893	
		Sodium	5.3		mg/L	P366893	
		Zinc	5.0	U	ug/L	P366893	
	EPA 200.8 Rev. 5.4	Aluminum	52		ug/L	P366893	
		Antimony	0.059	I	ug/L	P366893	
		Arsenic	0.24		ug/L	P366893	
		Beryllium	0.016	I	ug/L	P366893	
		Boron**	24.3		ug/L	P366893	
		Cadmium	0.020	U	ug/L	P366893	
		Chromium	0.40	U	ug/L	P366893	
		Cobalt	0.182		ug/L	P366893	
		Copper	0.54	I	ug/L	P366893	
		Lead	0.27	I	ug/L	P366893	
		Manganese	14.5		ug/L	P366893	
		Molybdenum	0.15	U	ug/L	P366893	
		Nickel	0.50	U	ug/L	P366893	
		Selenium	0.24	I	ug/L	P366893	
		Silver	0.010	U	ug/L	P366893	
		Thallium	0.10	U	ug/L	P366893	

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: MS accuracy for imazapyr could not be assessed due to high concentration of parameter in the spiked sample. J - second source check standards for some analytes were not available for analysis.
EPA 8270E: Refer to the narrative for an explanation of QC Codes.
EPA 8270E: V - Due to the presence of atrazine desethyl in both Method Blank and the sample. Analytical results were confirmed by re-extraction and re-analysis. MS accuracy for hexazinone not assessed due to high content of this parameter in the sample spiked. Refer to the narrative for an explanation of QC Codes.

Sample Location: Marcus Creek upstream of Marcus Pointe Blvd **Collection Date/Time: 07/08/2019 10:30**

Field ID: G4NW0179 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2100788	EPA 180.1 Rev. 2.0	Turbidity	4.1	A	NTU	P366913	
	EPA 300.0 Rev. 2.1	Chloride	11		mg Cl/L	P367011	
		Sulfate	2.3		mg SO4/L	P367013	
	SM 2120 B	Color (true)	37		PCU	P366902	
	SM 2320 B-97	Total Alkalinity	72		mg CaCO3/L	P367072	
	SM 2540 C-97	TDS	105		mg/L	P367311	
	SM 2540 D-97	TSS	2	I	mg/L	P367318	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P367074	
2100789	EPA 350.1 Rev. 2.0	Ammonia-N	0.033		mg N/L	P367004	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.37		mg N/L	P366959	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.28		mg N/L	P366950	
	EPA 365.1 Rev. 2.0	Total-P	0.01		mg P/L	P366955	
	SM 5310 B-00	Organic Carbon	5.5		mg C/L	P367868	
2100790	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.005	I	mg P/L	P366908	
2100835	EPA 200.7 Rev. 4.4	Barium	28.4		ug/L	P366893	
		Calcium	17.3		mg/L	P366893	
		Iron	1.01E+03		ug/L	P366893	
		Magnesium	3.95		mg/L	P366893	
		Potassium	6.6		mg/L	P366893	
		Sodium	9.0		mg/L	P366893	
		Zinc	5.0	U	ug/L	P366893	
	EPA 200.8 Rev. 5.4	Aluminum	70		ug/L	P366893	
		Antimony	0.050	U	ug/L	P366893	
		Arsenic	0.58		ug/L	P366893	
		Boron**	222		ug/L	P366893	
		Cadmium	0.020	U	ug/L	P366893	
		Chromium	1.2	I	ug/L	P366893	
		Copper	0.40	U	ug/L	P366893	
		Lead	0.20	U	ug/L	P366893	
		Nickel	0.50	U	ug/L	P366893	
		Selenium	0.20	U	ug/L	P366893	
		Silver	0.010	U	ug/L	P366893	
		Thallium	0.10	U	ug/L	P366893	

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

Sample Location: Direct Runoff-Graveyard Branch @ Tradewinds Dr **Collection Date/Time: 07/08/2019 11:35**

Field ID: G4NW0176 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2100791	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P366913	
	EPA 300.0 Rev. 2.1	Chloride	7.0		mg Cl/L	P367011	
		Sulfate	5.4		mg SO4/L	P367013	
	SM 2120 B	Color (true)	17	A	PCU	P366902	
	SM 2320 B-97	Total Alkalinity	35		mg CaCO3/L	P367072	
	SM 2540 C-97	TDS	58		mg/L	P367312	
	SM 2540 D-97	TSS	4	I	mg/L	P367319	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P367074	
2100792	EPA 350.1 Rev. 2.0	Ammonia-N	0.032		mg N/L	P367004	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.24		mg N/L	P366959	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.27		mg N/L	P366950	
	EPA 365.1 Rev. 2.0	Total-P	0.019		mg P/L	P366955	
	SM 5310 B-00	Organic Carbon	2.2		mg C/L	P367868	
2100793	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P366908	

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: P366913

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P366893

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P366893

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Cobalt	0.020	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.10	U	ug/L
Molybdenum	0.15	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P367011

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P367013

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367004

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366959

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366950

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366955

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366906

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366908

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

Reference Method: EPA 8270E
Batch ID: P366942

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P366942

Component	Result	Code	Units
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: P367025

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	2.3	I	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
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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P367025

Component	Result	Code	Units
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: P366942

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

Reference Method: EPA 8321B
Batch ID: P366930

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: EPA 8321B
Batch ID: P366931

Component	Result	Code	Units
3-Hydroxycarbofuran	0.0020	U	ug/L
Aldicarb	0.020	U	ug/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P366931

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

Reference Method: EPA 8321B
Batch ID: P367009

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: SM 2120 B
Batch ID: P366901

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P366902

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P367072

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

Reference Method: SM 2540 C-97
Batch ID: P367311

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P367312

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P367318

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P367319

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P367074

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P367017

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

Reference Method: SM 5310 B-00
Batch ID: P367868

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: P366893

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	97.5		P	85 - 115
Calcium	92.3		P	85 - 115
Iron	93.8		P	85 - 115
Magnesium	98.3		P	85 - 115
Potassium	96.6		P	85 - 115
Sodium	93.5		P	85 - 115
Zinc	96.7		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P366893

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	98.6		P	85 - 115
Antimony	96.6		P	85 - 115
Arsenic	100		P	85 - 115
Beryllium	95.9		P	85 - 115
Boron	105		P	85 - 115
Cadmium	99.3		P	85 - 115
Chromium	95.4		P	85 - 115
Cobalt	98.9		P	85 - 115
Copper	101		P	85 - 115
Lead	103		P	85 - 115
Manganese	96.4		P	85 - 115
Molybdenum	95.4		P	85 - 115
Nickel	104		P	85 - 115
Selenium	102		P	85 - 115
Silver	100		P	85 - 115
Thallium	101		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P367011

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P367013

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367004

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366959

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366950

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	104		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366955

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366906

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366908

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.2		P	90 - 110

Reference Method: EPA 8270E
Batch ID: P366942

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	63.9	65.9	P/P	20 - 93.0
Alpha-BHC	122	124	F/F	57 - 119
Alpha-Chlordane	90.2	86.9	P/P	58 - 112
Beta-BHC	143	141	P/P	56 - 149
Bifenthrin	79.4	72.8	P/P	30 - 134
Carbophenothion	90.3	98.6	P/P	26 - 147
Chlorothalonil	147	132	P/P	20 - 155
Cis-Nonachlor	88.5	84.9	P/P	54 - 115
Cypermethrin	83.8	81.4	P/P	40 - 137
DDD-p,p'	99.3	95.2	P/P	65 - 129
DDE-p,p'	89.5	87.5	P/P	57 - 116
DDT-p,p'	120	116	P/P	53 - 133
Delta-BHC	152	142	P/P	59 - 163
Dicofol	98.6	92.9	P/P	24 - 138
Dieldrin	99.1	95.5	P/P	60 - 120
Endosulfan I	95.6	95.1	P/P	64 - 118
Endosulfan II	102	102	P/P	58 - 142
Endosulfan Sulfate	94.3	90.3	P/P	60 - 127
Endrin	95.7	91.5	P/P	59 - 122
Endrin Aldehyde	104	97.9	P/P	49 - 132
Endrin Ketone	90.5	88.9	P/P	64 - 121
Ethalfluralin	107	99.2	P/P	60 - 126
Gamma-BHC	129	135	P/P	56 - 141
Gamma-Chlordane	86.1	83.8	P/P	56 - 110
Heptachlor	77.7	75.7	P/P	46 - 96.0
Heptachlor Epoxide	93.9	92.4	P/P	61 - 112
Hexachlorobenzene	83.0	78.6	P/P	44 - 98.0
Methoxychlor	132	129	P/P	63 - 134

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P366942

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Mirex	65.4	64.4	P/P	45 - 100
Permethrin	67.1	63.4	P/P	53 - 115
Trans-Nonachlor	85.8	82.0	P/P	47 - 110
Trifluralin	103	99.8	P/P	39 - 142

Reference Method: EPA 8270E
Batch ID: P367025

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	87.0	105	P/P	69 - 122
Alachlor	84.6	99.3	P/P	71 - 120
Ametryn	84.8	95.8	P/P	47 - 138
Atrazine	89.1	109	P/P	74 - 124
Atrazine Desethyl	128	136	P/P	38 - 138
Azinphos Methyl	98.6	118	P/P	69 - 154
Bromacil	73.6	84.8	P/P	39 - 121
Butylate	53.1	56.3	P/P	27 - 87.0
Chlorpyrifos Ethyl	85.0	102	P/P	69 - 118
Chlorpyrifos Methyl	91.5	108	P/P	70 - 120
Cyanazine	169	190	P/P	20 - 250
Demeton	49.5	80.0	P/P	39 - 118
Diazinon	101	121	P/P	68 - 127
Dimethenamid	73.2	87.0	P/P	66 - 125
Disulfoton	55.6	93.4	P/P	52 - 126
Dithiopyr	89.6	106	P/P	67 - 127
EPTC	53.1	52.7	P/P	24 - 88.0
Ethion	52.5	56.9	P/P	51 - 132
Ethoprop	89.7	108	P/P	58 - 117
Fenamiphos	75.3	89.7	P/P	38 - 139
Fipronil	88.2	105	P/P	61 - 124
Fipronil Desulfinyl	80.0	92.4	P/P	47 - 120
Fipronil Sulfide	80.3	92.3	P/P	56 - 119
Fipronil Sulfone	69.1	74.4	P/P	50 - 117
Fonofos	95.6	113	P/P	60 - 121
Hexazinone	93.9	103	P/P	55 - 137
Malathion	83.6	96.2	P/P	66 - 126
Metalaxyl	90.2	100	P/P	33 - 140
Metolachlor	79.2	92.8	P/P	69 - 119
Metribuzin	171	218	P/P	31 - 238
Mevinphos	84.4	96.5	P/P	42 - 113
Molinate	66.2	75.8	P/P	32 - 96.0
Norflurazon	83.1	99.2	P/P	54 - 123
Oxadiazon	78.6	96.4	P/P	63 - 128
Parathion Ethyl	87.7	98.1	P/P	72 - 111
Parathion Methyl	95.3	107	P/P	74 - 126
Pendimethalin	86.0	96.1	P/P	61 - 131
Phorate	69.7	85.7	P/P	51 - 115
Prodiamine	39.3	43.3	P/P	38 - 144
Prometon	74.2	88.2	P/P	54 - 119
Prometryn	83.9	93.9	P/P	63 - 120
Simazine	104	120	P/P	75 - 126
Tebuconazole	50.7	59.3	P/P	20 - 119

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P367025

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Terbufos	84.0	106	P/P	64 - 116
Terbuthylazine	87.6	101	P/P	73 - 117

Reference Method: EPA 8276
Batch ID: P366942

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	85.4	85.9	P/P	43 - 128
Toxaphene	72.0	71.2	P/P	38 - 140

Reference Method: EPA 8321B
Batch ID: P366930

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	135		P	40 - 150
Acetaminophen	93.3		P	30 - 150
Acetamiprid	91.8		P	40 - 150
Afidopyropen	75.0		P	40 - 150
Bentazon	96.7		P	30 - 150
Benzovindiflupyr	88.8		P	40 - 150
Carbamazepine	90.2		P	40 - 150
Clothianidin	77.5		P	40 - 150
Dinotefuran	86.4		P	40 - 150
Diuron	88.7		P	40 - 150
Fenuron	98.6		P	40 - 150
Fluridone	94.9		P	40 - 150
Hydrocodone	94.7		P	40 - 150
Ibuprofen	98.5		P	30 - 150
Imazapyr	74.0		P	40 - 150
Imidacloprid	91.4		P	40 - 150
Linuron	75.0		P	40 - 150
Mandestrobin	88.2		P	40 - 150
MCPP	146		P	40 - 150
Naproxen	90.0		P	40 - 150
Primidone	89.4		P	40 - 150
Pyraclostrobin	95.3		P	30 - 150
Thiamethoxam	111		P	40 - 150
Tolfenpyrad	52.2		P	40 - 150
Triclopyr	139		P	30 - 150

Reference Method: EPA 8321B
Batch ID: P366931

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	101		P	40 - 150
Aldicarb	112		P	30 - 150
Aldicarb Sulfone	105		P	40 - 150
Aldicarb Sulfoxide	72.0		P	40 - 150
Carbaryl	85.9		P	40 - 150
Carbofuran	105		P	40 - 150
Methiocarb	80.0		P	40 - 150
Methomyl	85.9		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P366931

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Oxamyl	99.9		P	40 - 150
Propoxur	95.3		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P367009

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	112		P	40 - 150
AMPA	90.0		P	40 - 150
Endothall	115		P	40 - 150
Glufosinate	108		P	40 - 150
Glyphosate	95.9		P	40 - 140
Sucralose	46.7		P	40 - 150

Reference Method: SM 2120 B
Batch ID: P366901

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	93.9		P	85 - 115

Reference Method: SM 2120 B
Batch ID: P366902

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

Reference Method: SM 2320 B-97
Batch ID: P367072

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

Reference Method: SM 4500 F-C-97
Batch ID: P367074

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.0		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P367017

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.7		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P367868

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.1		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P366893

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099538	Barium	96.0		P	80 - 120
2099538	Calcium	91.9		P	80 - 120
2099538	Iron	94.5		P	80 - 120
2099538	Magnesium	94.4		P	80 - 120
2099538	Potassium	96.6		P	80 - 120
2099538	Sodium	93.3		P	80 - 120
2099538	Zinc	99.6		P	80 - 120
2100834	Barium	90.1	99.4	P/P	80 - 120
2100834	Calcium	92.7		P	80 - 120
2100834	Iron	88.4	93.8	P/P	80 - 120
2100834	Magnesium	88.4	99.0	P/P	80 - 120
2100834	Potassium	89.4	95.9	P/P	80 - 120
2100834	Sodium	94.1		P	80 - 120
2100834	Zinc	91.3	99.9	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P366893

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2099538	Aluminum	100		P	80 - 120
2099538	Antimony	98.7		P	80 - 120
2099538	Arsenic	103		P	80 - 120
2099538	Beryllium	95.1		P	80 - 120
2099538	Boron	103		P	80 - 120
2099538	Cadmium	99.3		P	80 - 120
2099538	Chromium	93.9		P	80 - 120
2099538	Cobalt	97.0		P	80 - 120
2099538	Copper	99.1		P	80 - 120
2099538	Lead	107		P	80 - 120
2099538	Manganese	94.0		P	80 - 120
2099538	Molybdenum	101		P	80 - 120
2099538	Nickel	99.6		P	80 - 120
2099538	Selenium	100		P	80 - 120
2099538	Silver	99.4		P	80 - 120
2099538	Thallium	106		P	80 - 120
2100834	Aluminum	93.9	93.1	P/P	80 - 120
2100834	Antimony	97.0	97.5	P/P	80 - 120
2100834	Arsenic	98.8	98.8	P/P	80 - 120
2100834	Beryllium	95.3	94.3	P/P	80 - 120
2100834	Boron	104	107	P/P	80 - 120
2100834	Cadmium	98.6	99.1	P/P	80 - 120
2100834	Chromium	96.8	96.3	P/P	80 - 120
2100834	Cobalt	96.6	96.6	P/P	80 - 120
2100834	Copper	94.5	103	P/P	80 - 120
2100834	Lead	96.6	96.3	P/P	80 - 120
2100834	Manganese	96.1	96.8	P/P	80 - 120
2100834	Molybdenum	96.1	96.5	P/P	80 - 120
2100834	Nickel	101	102	P/P	80 - 120
2100834	Selenium	97.2	99.4	P/P	80 - 120
2100834	Silver	100	99.2	P/P	80 - 120
2100834	Thallium	102	105	P/P	80 - 120

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P367011

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100782	Chloride	99.3	98.9	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P367013

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100782	Sulfate	99.1	98.9	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367004

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100783	Ammonia-N	104	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366959

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100789	Kjeldahl Nitrogen	105	107	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366950

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100741	NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366955

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100789	Total-P	105	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366906

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100784	O-Phosphate-P	95.9	97.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366908

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100793	O-Phosphate-P	95.7	96.4	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P366942

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2101442	Aldrin	61.6	60.4	P/P	25 - 92.0
2101442	Alpha-BHC	128	124	P/P	49 - 130
2101442	Alpha-Chlordane	92.4	84.0	P/P	50 - 115
2101442	Beta-BHC	166	154	F/P	43 - 157

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P366942

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2101442	Bifenthrin	81.9	76.6	P/P	46 - 116
2101442	Carbophenothion	131	113	P/P	27 - 180
2101442	Chlorothalonil	175	159	P/P	10 - 216
2101442	Cis-Nonachlor	92.2	81.2	P/P	55 - 112
2101442	Cypermethrin	89.0	79.3	P/P	40 - 153
2101442	DDD-p,p'	106	95.2	P/P	53 - 128
2101442	DDE-p,p'	94.0	85.7	P/P	48 - 116
2101442	DDT-p,p'	119	114	P/P	47 - 128
2101442	Delta-BHC	172	171	P/P	51 - 196
2101442	Dicofol	92.8	90.0	P/P	10 - 147
2101442	Dieldrin	102	93.8	P/P	48 - 128
2101442	Endosulfan I	100	94.9	P/P	58 - 126
2101442	Endosulfan II	111	103	P/P	50 - 150
2101442	Endosulfan Sulfate	94.3	87.5	P/P	56 - 130
2101442	Endrin	108	95.7	P/P	50 - 126
2101442	Endrin Aldehyde	101	93.1	P/P	12 - 145
2101442	Endrin Ketone	98.5	93.2	P/P	59 - 132
2101442	Ethalfluralin	109	103	P/P	65 - 122
2101442	Gamma-BHC	147	149	P/P	50 - 155
2101442	Gamma-Chlordane	88.8	80.5	P/P	50 - 112
2101442	Heptachlor	73.9	70.7	P/P	41 - 98.0
2101442	Heptachlor Epoxide	97.4	90.3	P/P	55 - 117
2101442	Hexachlorobenzene	80.7	74.1	P/P	47 - 91.0
2101442	Methoxychlor	131	129	P/P	55 - 133
2101442	Mirex	65.3	61.3	P/P	44 - 101
2101442	Permethrin	72.0	62.7	P/P	52 - 124
2101442	Trans-Nonachlor	89.3	81.1	P/P	53 - 99.0
2101442	Trifluralin	101	98.6	P/P	10 - 201

Reference Method: EPA 8270E
Batch ID: P367025

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2101178	Acetochlor	91.3	96.0	P/P	63 - 129
2101178	Alachlor	86.7	90.5	P/P	65 - 127
2101178	Ametryn	87.3	90.1	P/P	40 - 164
2101178	Atrazine	102	103	P/P	66 - 135
2101178	Atrazine Desethyl	109	110	P/P	14 - 157
2101178	Azinphos Methyl	97.1	103	P/P	49 - 180
2101178	Bromacil	73.8	81.0	P/P	48 - 130
2101178	Butylate	48.5	63.4	P/P	10 - 94.0
2101178	Chlorpyrifos Ethyl	93.3	96.6	P/P	58 - 123
2101178	Chlorpyrifos Methyl	92.9	99.3	P/P	58 - 125
2101178	Cyanazine	186	188	P/P	24 - 253
2101178	Demeton	79.2	77.9	P/P	25 - 149
2101178	Diazinon	111	107	P/P	59 - 144
2101178	Dimethenamid	72.5	82.7	P/P	46 - 139
2101178	Disulfoton	92.6	90.8	P/P	54 - 132
2101178	Dithiopyr	91.5	97.1	P/P	64 - 130
2101178	EPTC	55.8	65.2	P/P	10 - 92.0
2101178	Ethion	37.9	48.1	P/P	30 - 148
2101178	Ethoprop	99.2	100	P/P	50 - 130

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P367025

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2101178	Fenamiphos	77.2	93.9	P/P	49 - 142
2101178	Fipronil	89.9	97.3	P/P	46 - 140
2101178	Fipronil Desulfinyl	82.3	88.8	P/P	30 - 121
2101178	Fipronil Sulfide	76.5	88.4	P/P	31 - 136
2101178	Fipronil Sulfone	73.9	79.0	P/P	16 - 136
2101178	Fonofos	103	109	P/P	55 - 129
2101178	Malathion	81.7	87.7	P/P	56 - 135
2101178	Metalaxyl	90.9	95.5	P/P	54 - 135
2101178	Metolachlor	83.1	84.3	P/P	51 - 140
2101178	Metribuzin	217	222	P/P	45 - 254
2101178	Mevinphos	93.6	89.1	P/P	33 - 131
2101178	Molinate	74.8	79.4	P/P	14 - 98.0
2101178	Norflurazon	87.7	89.5	P/P	34 - 136
2101178	Oxadiazon	71.1	84.8	P/P	67 - 116
2101178	Parathion Ethyl	92.3	94.2	P/P	66 - 118
2101178	Parathion Methyl	92.1	96.5	P/P	64 - 136
2101178	Pendimethalin	93.6	94.9	P/P	59 - 144
2101178	Phorate	91.2	76.6	P/P	42 - 130
2101178	Prodiamine	44.3	49.8	P/P	42 - 148
2101178	Prometon	75.3	83.5	P/P	59 - 134
2101178	Prometryn	85.8	89.2	P/P	54 - 135
2101178	Simazine	99.4	105	P/P	53 - 156
2101178	Tebuconazole	36.7	51.2	P/P	10 - 131
2101178	Terbufos	104	99.5	P/P	57 - 131
2101178	Terbuthylazine	92.4	95.4	P/P	68 - 125

Reference Method: EPA 8276
Batch ID: P366942

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2101466	Chlordane	103	112	P/P	34 - 136
2101466	Toxaphene	77.2	82.0	P/P	22 - 152

Reference Method: EPA 8321B
Batch ID: P366930

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100814	2,4-D	118	130	P/P	40 - 150
2100814	Acetaminophen	95.7	97.8	P/P	30 - 150
2100814	Acetamiprid	92.6	96.6	P/P	40 - 150
2100814	Afidopyropen	86.2	85.7	P/P	40 - 150
2100814	Bentazon	116	107	P/P	30 - 150
2100814	Benzovindiflupyr	79.6	78.4	P/P	40 - 150
2100814	Carbamazepine	73.8	76.4	P/P	40 - 150
2100814	Clothianidin	69.4	68.4	P/P	40 - 150
2100814	Dinotefuran	97.5	103	P/P	40 - 150
2100814	Diuron	64.1	68.6	P/P	40 - 150
2100814	Fenuron	76.5	80.4	P/P	40 - 150
2100814	Fluridone	75.1	79.7	P/P	40 - 150
2100814	Hydrocodone	75.3	95.3	P/P	40 - 150
2100814	Ibuprofen	83.9	80.7	P/P	30 - 150
2100814	Imidacloprid	146	169	P/F	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P366930

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100814	Linuron	56.7	59.8	P/P	40 - 150
2100814	Mandestrobin	68.2	71.1	P/P	40 - 150
2100814	MCPP	153	160	F/F	40 - 150
2100814	Naproxen	89.2	86.0	P/P	40 - 150
2100814	Primidone	90.7	93.5	P/P	40 - 150
2100814	Pyraclostrobin	88.2	89.5	P/P	30 - 150
2100814	Thiamethoxam	149	146	P/P	40 - 150
2100814	Tolfenpyrad	53.2	57.4	P/P	40 - 150
2100814	Triclopyr	133	131	P/P	30 - 150

Reference Method: EPA 8321B
Batch ID: P366931

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2102579	3-Hydroxycarbofuran	91.0	85.2	P/P	40 - 150
2102579	Aldicarb	67.3	76.5	P/P	30 - 150
2102579	Aldicarb Sulfone	101	91.6	P/P	40 - 150
2102579	Aldicarb Sulfoxide	47.6	43.0	P/P	40 - 150
2102579	Carbaryl	62.1	57.3	P/P	40 - 150
2102579	Carbofuran	78.1	72.2	P/P	40 - 150
2102579	Methiocarb	70.0	67.1	P/P	40 - 150
2102579	Methomyl	60.9	66.9	P/P	40 - 150
2102579	Oxamyl	97.7	71.2	P/P	40 - 150
2102579	Propoxur	70.7	66.3	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P367009

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100814	Acesulfame K	103	114	P/P	40 - 150
2100814	AMPA	46.6	43.8	P/P	40 - 150
2100814	Endothall	83.0	87.7	P/P	40 - 150
2100814	Glufosinate	72.5	73.0	P/P	40 - 150
2100814	Glyphosate	104	92.5	P/P	40 - 140
2100814	Sucralose	76.6	86.9	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P367074

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100774	Fluoride	99.3	100	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P367017

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100630	Organic Carbon	96.4	96.8	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P367868

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

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P367868

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100964	Organic Carbon	93.1	92.1	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P366913

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100788	Turbidity	2.44	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P366893

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100834	Barium	9.15	Spike	P	0 - 20
2100834	Calcium	12.2	Spike	P	0 - 20
2100834	Iron	5.42	Spike	P	0 - 20
2100834	Magnesium	7.32	Spike	P	0 - 20
2100834	Potassium	5.72	Spike	P	0 - 20
2100834	Sodium	7.02	Spike	P	0 - 20
2100834	Zinc	8.94	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P366893

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100834	Aluminum	0.852	Spike	P	0 - 20
2100834	Antimony	0.484	Spike	P	0 - 20
2100834	Arsenic	0.0476	Spike	P	0 - 20
2100834	Beryllium	1.02	Spike	P	0 - 20
2100834	Boron	2.08	Spike	P	0 - 20
2100834	Cadmium	0.512	Spike	P	0 - 20
2100834	Chromium	0.537	Spike	P	0 - 20
2100834	Cobalt	0.0133	Spike	P	0 - 20
2100834	Copper	8.36	Spike	P	0 - 20
2100834	Lead	0.331	Spike	P	0 - 20
2100834	Manganese	0.456	Spike	P	0 - 20
2100834	Molybdenum	0.412	Spike	P	0 - 20
2100834	Nickel	0.609	Spike	P	0 - 20
2100834	Selenium	2.28	Spike	P	0 - 20
2100834	Silver	0.709	Spike	P	0 - 20
2100834	Thallium	2.77	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P367011

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100782	Chloride	0.340	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P367013

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100782	Sulfate	0.185	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367004

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100783	Ammonia-N	0.595	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366959

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100789	Kjeldahl Nitrogen	1.83	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366950

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100741	NO2NO3-N	0.370	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366955

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100789	Total-P	2.95	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366906

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100784	O-Phosphate-P	1.45	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P366908

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100793	O-Phosphate-P	0.729	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P366942

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101442	Aldrin	1.98	Spike	P	0 - 30
2101442	Alpha-BHC	3.07	Spike	P	0 - 30
2101442	Alpha-Chlordane	9.44	Spike	P	0 - 30
2101442	Beta-BHC	7.37	Spike	P	0 - 30
2101442	Bifenthrin	6.72	Spike	P	0 - 30
2101442	Carbophenothion	14.9	Spike	P	0 - 30
2101442	Chlorothalonil	9.95	Spike	P	0 - 30
2101442	Cis-Nonachlor	12.7	Spike	P	0 - 30
2101442	Cypermethrin	11.6	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P366942

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101442	DDD-p,p'	10.4	Spike	P	0 - 30
2101442	DDE-p,p'	9.25	Spike	P	0 - 30
2101442	DDT-p,p'	5.05	Spike	P	0 - 30
2101442	Delta-BHC	0.214	Spike	P	0 - 30
2101442	Dicofol	3.10	Spike	P	0 - 30
2101442	Dieldrin	8.47	Spike	P	0 - 30
2101442	Endosulfan I	5.62	Spike	P	0 - 30
2101442	Endosulfan II	7.51	Spike	P	0 - 30
2101442	Endosulfan Sulfate	7.44	Spike	P	0 - 30
2101442	Endrin	12.1	Spike	P	0 - 30
2101442	Endrin Aldehyde	8.44	Spike	P	0 - 30
2101442	Endrin Ketone	5.49	Spike	P	0 - 30
2101442	Ethalfluralin	5.34	Spike	P	0 - 30
2101442	Gamma-BHC	1.19	Spike	P	0 - 30
2101442	Gamma-Chlordane	9.76	Spike	P	0 - 30
2101442	Heptachlor	4.41	Spike	P	0 - 30
2101442	Heptachlor Epoxide	7.49	Spike	P	0 - 30
2101442	Hexachlorobenzene	8.55	Spike	P	0 - 30
2101442	Methoxychlor	1.28	Spike	P	0 - 30
2101442	Mirex	6.29	Spike	P	0 - 30
2101442	Permethrin	13.9	Spike	P	0 - 30
2101442	Trans-Nonachlor	9.63	Spike	P	0 - 30
2101442	Trifluralin	2.52	Spike	P	0 - 30
LFB	Aldrin	3.06	LCS	P	0 - 30
LFB	Alpha-BHC	1.44	LCS	P	0 - 30
LFB	Alpha-Chlordane	3.69	LCS	P	0 - 30
LFB	Beta-BHC	1.14	LCS	P	0 - 30
LFB	Bifenthrin	8.63	LCS	P	0 - 30
LFB	Carbophenothion	8.82	LCS	P	0 - 30
LFB	Chlorothalonil	10.9	LCS	P	0 - 30
LFB	Cis-Nonachlor	4.15	LCS	P	0 - 30
LFB	Cypermethrin	2.90	LCS	P	0 - 30
LFB	DDD-p,p'	4.23	LCS	P	0 - 30
LFB	DDE-p,p'	2.23	LCS	P	0 - 30
LFB	DDT-p,p'	3.25	LCS	P	0 - 30
LFB	Delta-BHC	7.16	LCS	P	0 - 30
LFB	Dicofol	5.92	LCS	P	0 - 30
LFB	Dieldrin	3.69	LCS	P	0 - 30
LFB	Endosulfan I	0.595	LCS	P	0 - 30
LFB	Endosulfan II	0.00993	LCS	P	0 - 30
LFB	Endosulfan Sulfate	4.36	LCS	P	0 - 30
LFB	Endrin	4.46	LCS	P	0 - 30
LFB	Endrin Aldehyde	5.69	LCS	P	0 - 30
LFB	Endrin Ketone	1.78	LCS	P	0 - 30
LFB	Ethalfluralin	7.57	LCS	P	0 - 30
LFB	Gamma-BHC	4.09	LCS	P	0 - 30
LFB	Gamma-Chlordane	2.78	LCS	P	0 - 30
LFB	Heptachlor	2.66	LCS	P	0 - 30
LFB	Heptachlor Epoxide	1.66	LCS	P	0 - 30
LFB	Hexachlorobenzene	5.46	LCS	P	0 - 30
LFB	Methoxychlor	2.27	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P366942

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Mirex	1.54	LCS	P	0 - 30
LFB	Permethrin	5.65	LCS	P	0 - 30
LFB	Trans-Nonachlor	4.65	LCS	P	0 - 30
LFB	Trifluralin	3.22	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P367025

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101178	Acetochlor	5.02	Spike	P	0 - 30
2101178	Alachlor	4.28	Spike	P	0 - 30
2101178	Ametryn	3.11	Spike	P	0 - 30
2101178	Atrazine	1.81	Spike	P	0 - 30
2101178	Atrazine Desethyl	0.755	Spike	P	0 - 30
2101178	Azinphos Methyl	5.96	Spike	P	0 - 30
2101178	Bromacil	9.25	Spike	P	0 - 30
2101178	Butylate	26.6	Spike	P	0 - 30
2101178	Chlorpyrifos Ethyl	3.44	Spike	P	0 - 30
2101178	Chlorpyrifos Methyl	6.67	Spike	P	0 - 30
2101178	Cyanazine	1.01	Spike	P	0 - 30
2101178	Demeton	1.69	Spike	P	0 - 30
2101178	Diazinon	4.08	Spike	P	0 - 30
2101178	Dimethenamid	13.1	Spike	P	0 - 30
2101178	Disulfoton	1.96	Spike	P	0 - 30
2101178	Dithiopyr	5.98	Spike	P	0 - 30
2101178	EPTC	15.7	Spike	P	0 - 30
2101178	Ethion	23.6	Spike	P	0 - 30
2101178	Ethoprop	1.25	Spike	P	0 - 30
2101178	Fenamiphos	19.5	Spike	P	0 - 30
2101178	Fipronil	7.88	Spike	P	0 - 30
2101178	Fipronil Desulfinyl	7.56	Spike	P	0 - 30
2101178	Fipronil Sulfide	14.5	Spike	P	0 - 30
2101178	Fipronil Sulfone	6.76	Spike	P	0 - 30
2101178	Fonofos	5.42	Spike	P	0 - 30
2101178	Hexazinone	0.441	Spike	P	0 - 30
2101178	Malathion	7.11	Spike	P	0 - 30
2101178	Metalaxyl	5.03	Spike	P	0 - 30
2101178	Metolachlor	1.49	Spike	P	0 - 30
2101178	Metribuzin	2.54	Spike	P	0 - 30
2101178	Mevinphos	4.91	Spike	P	0 - 30
2101178	Molinate	5.98	Spike	P	0 - 30
2101178	Norflurazon	2.07	Spike	P	0 - 30
2101178	Oxadiazon	17.5	Spike	P	0 - 30
2101178	Parathion Ethyl	2.01	Spike	P	0 - 30
2101178	Parathion Methyl	4.67	Spike	P	0 - 30
2101178	Pendimethalin	1.36	Spike	P	0 - 30
2101178	Phorate	17.5	Spike	P	0 - 30
2101178	Prodiamine	11.6	Spike	P	0 - 30
2101178	Prometon	10.4	Spike	P	0 - 30
2101178	Prometryn	3.86	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P367025

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101178	Simazine	4.98	Spike	P	0 - 30
2101178	Tebuconazole	33.1	Spike	F	0 - 30
2101178	Terbufos	4.43	Spike	P	0 - 30
2101178	Terbuthylazine	3.17	Spike	P	0 - 30
LFB	Acetochlor	18.7	LCS	P	0 - 30
LFB	Alachlor	15.9	LCS	P	0 - 30
LFB	Ametryn	12.2	LCS	P	0 - 30
LFB	Atrazine	20.1	LCS	P	0 - 30
LFB	Atrazine Desethyl	6.29	LCS	P	0 - 30
LFB	Azinphos Methyl	18.2	LCS	P	0 - 30
LFB	Bromacil	14.2	LCS	P	0 - 30
LFB	Butylate	5.79	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	17.9	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	16.2	LCS	P	0 - 30
LFB	Cyanazine	11.8	LCS	P	0 - 30
LFB	Demeton	47.1	LCS	F	0 - 30
LFB	Diazinon	17.3	LCS	P	0 - 30
LFB	Dimethenamid	17.2	LCS	P	0 - 30
LFB	Disulfoton	50.7	LCS	F	0 - 30
LFB	Dithiopyr	16.4	LCS	P	0 - 30
LFB	EPTC	0.703	LCS	P	0 - 30
LFB	Ethion	7.90	LCS	P	0 - 30
LFB	Ethoprop	18.2	LCS	P	0 - 30
LFB	Fenamiphos	17.5	LCS	P	0 - 30
LFB	Fipronil	17.1	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	14.4	LCS	P	0 - 30
LFB	Fipronil Sulfide	13.9	LCS	P	0 - 30
LFB	Fipronil Sulfone	7.28	LCS	P	0 - 30
LFB	Fonofos	16.4	LCS	P	0 - 30
LFB	Hexazinone	9.42	LCS	P	0 - 30
LFB	Malathion	14.0	LCS	P	0 - 30
LFB	Metalaxyl	10.3	LCS	P	0 - 30
LFB	Metolachlor	15.9	LCS	P	0 - 30
LFB	Metribuzin	24.6	LCS	P	0 - 30
LFB	Mevinphos	13.4	LCS	P	0 - 30
LFB	Molinate	13.6	LCS	P	0 - 30
LFB	Norflurazon	17.6	LCS	P	0 - 30
LFB	Oxadiazon	20.3	LCS	P	0 - 30
LFB	Parathion Ethyl	11.3	LCS	P	0 - 30
LFB	Parathion Methyl	11.5	LCS	P	0 - 30
LFB	Pendimethalin	11.0	LCS	P	0 - 30
LFB	Phorate	20.6	LCS	P	0 - 30
LFB	Prodiamine	9.66	LCS	P	0 - 30
LFB	Prometon	17.3	LCS	P	0 - 30
LFB	Prometryn	11.2	LCS	P	0 - 30
LFB	Simazine	14.4	LCS	P	0 - 30
LFB	Tebuconazole	15.5	LCS	P	0 - 30
LFB	Terbufos	23.1	LCS	P	0 - 30
LFB	Terbuthylazine	14.0	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8276
Batch ID: P366942

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101466	Chlordane	8.10	Spike	P	0 - 30
2101466	Toxaphene	6.01	Spike	P	0 - 30
LFB	Chlordane	0.548	LCS	P	0 - 30
LFB	Toxaphene	1.18	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P366930

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100814	2,4-D	6.65	Spike	P	0 - 30
2100814	Acetaminophen	2.11	Spike	P	0 - 30
2100814	Acetamiprid	4.20	Spike	P	0 - 30
2100814	Afidopyropen	0.553	Spike	P	0 - 30
2100814	Bentazon	2.70	Spike	P	0 - 30
2100814	Benzovindiflupyr	1.52	Spike	P	0 - 30
2100814	Carbamazepine	3.01	Spike	P	0 - 30
2100814	Clothianidin	1.29	Spike	P	0 - 30
2100814	Dinotefuran	5.54	Spike	P	0 - 30
2100814	Diuron	5.59	Spike	P	0 - 30
2100814	Fenuron	5.07	Spike	P	0 - 30
2100814	Fluridone	4.42	Spike	P	0 - 30
2100814	Hydrocodone	23.4	Spike	P	0 - 30
2100814	Ibuprofen	3.96	Spike	P	0 - 30
2100814	Imazapyr	6.21	Spike	P	0 - 30
2100814	Imidacloprid	10.3	Spike	P	0 - 30
2100814	Linuron	5.32	Spike	P	0 - 30
2100814	Mandestrobin	4.03	Spike	P	0 - 30
2100814	MCPP	4.11	Spike	P	0 - 30
2100814	Naproxen	3.56	Spike	P	0 - 30
2100814	Primidone	3.04	Spike	P	0 - 30
2100814	Pyraclostrobin	1.55	Spike	P	0 - 30
2100814	Thiamethoxam	1.64	Spike	P	0 - 30
2100814	Tolfenpyrad	7.50	Spike	P	0 - 30
2100814	Triclopyr	1.40	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P366931

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2102579	3-Hydroxycarbofuran	6.60	Spike	P	0 - 30
2102579	Aldicarb	12.7	Spike	P	0 - 30
2102579	Aldicarb Sulfone	10.1	Spike	P	0 - 30
2102579	Aldicarb Sulfoxide	10.3	Spike	P	0 - 30
2102579	Carbaryl	6.22	Spike	P	0 - 30
2102579	Carbofuran	7.80	Spike	P	0 - 30
2102579	Methiocarb	4.23	Spike	P	0 - 30
2102579	Methomyl	9.41	Spike	P	0 - 30
2102579	Oxamyl	31.4	Spike	F	0 - 30
2102579	Propoxur	6.38	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P367009

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100814	Acesulfame K	9.15	Spike	P	0 - 30
2100814	AMPA	1.27	Spike	P	0 - 30
2100814	Endothall	5.51	Spike	P	0 - 30
2100814	Glufosinate	0.789	Spike	P	0 - 30
2100814	Glyphosate	2.06	Spike	P	0 - 30
2100814	Sucralose	11.5	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P366901

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100785	Color (true)	1.87	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P366902

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100791	Color (true)	3.09	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P367072

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100774	Total Alkalinity	0.117	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
Batch ID: P367311

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100665	TDS	3.19	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P367312

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100955	TDS	5.59	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P367074

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100774	Fluoride	0.470	Spike	P	0 - 2.5

Quality Assurance Report
Precision

Reference Method: SM 5310 B-00
Batch ID: P367017

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100630	Organic Carbon	0.246	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P367868

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100964	Organic Carbon	0.684	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report
Surrogates

Lab Sample ID: 2100828
Field Sample ID: G4NW0415

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	113	P	30 - 160

Lab Sample ID: 2100829
Field Sample ID: G4NW0415

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	151	P	30 - 160
EPA 8321B	Acetaminophen-d4	118	P	30 - 160
EPA 8321B	Carbamazepine-d10	93.2	P	30 - 160
EPA 8321B	Diuron-d6	94.5	P	30 - 160
EPA 8321B	Endothall-d6	53.8	P	30 - 160
EPA 8321B	Endothall-d6	53.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	81.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	81.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	92.9	P	30 - 160
EPA 8321B	Primidone-d5	113	P	30 - 160
EPA 8321B	Sucralose-d6	46.4	P	30 - 160
EPA 8321B	Sucralose-d6	46.4	P	30 - 160

Lab Sample ID: 2100830
Field Sample ID: G4NW0429

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	144	P	30 - 160
EPA 8321B	Acetaminophen-d4	113	P	30 - 160
EPA 8321B	Carbamazepine-d10	92.2	P	30 - 160
EPA 8321B	Diuron-d6	92.8	P	30 - 160
EPA 8321B	Endothall-d6	65.3	P	30 - 160
EPA 8321B	Endothall-d6	65.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	80.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	80.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	88.4	P	30 - 160
EPA 8321B	Primidone-d5	112	P	30 - 160
EPA 8321B	Sucralose-d6	152	P	30 - 160
EPA 8321B	Sucralose-d6	152	P	30 - 160

Lab Sample ID: 2100831
Field Sample ID: G4NW0430

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	134	P	30 - 160
EPA 8321B	Acetaminophen-d4	117	P	30 - 160
EPA 8321B	Carbamazepine-d10	85.8	P	30 - 160
EPA 8321B	Diuron-d6	92.4	P	30 - 160
EPA 8321B	Endothall-d6	54.0	P	30 - 160
EPA 8321B	Endothall-d6	54.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	78.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	78.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	87.7	P	30 - 160
EPA 8321B	Primidone-d5	104	P	30 - 160
EPA 8321B	Sucralose-d6	126	P	30 - 160
EPA 8321B	Sucralose-d6	126	P	30 - 160

Quality Assurance Report
Surrogates

Lab Sample ID: 2100832
Field Sample ID: G4NW0415

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	77.4	P	39 - 109
EPA 8270E	Tetrachloro-m-xylene	54.1	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	54.9	P	30 - 103
EPA 8276	PCNB	70.4	P	37 - 143

Lab Sample ID: 2100833
Field Sample ID: G4NW0415

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	108	P	68 - 130
EPA 8270E	Terbufos-d10	109	P	61 - 136

Quality Assurance Report
Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A92640
Included Lab Sample IDs: 2100782, 2100785, 2100788, 2100791

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

Reference Method: SM 2120 B
Run ID: A92652
Included Lab Sample IDs: 2100782, 2100785, 2100788, 2100791

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	90 - 115
Color (true)	99.8	101	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A92655
Included Lab Sample IDs: 2100784, 2100787, 2100790, 2100793

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	98.8	P/P	90 - 110
O-Phosphate-P	98.0	96.5	P/P	90 - 110
O-Phosphate-P	98.8	98.0	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A92658
Included Lab Sample IDs: 2100782, 2100785, 2100788, 2100791

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	102	102	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A92677
Included Lab Sample IDs: 2100783, 2100786, 2100789, 2100792

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	102	P/P	90 - 110
NO2NO3-N	104	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A92688
Included Lab Sample IDs: 2100783, 2100786, 2100789, 2100792

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	104	104	P/P	90 - 110
Ammonia-N	104	105	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A92691
Included Lab Sample IDs: 2100834, 2100835

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	98.7	99.4	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A92691
Included Lab Sample IDs: 2100834, 2100835

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	99.4	100	P/P	90 - 110
Calcium	94.5	95.5	P/P	90 - 110
Calcium	95.5	95.6	P/P	90 - 110
Iron	94.9	96.0	P/P	90 - 110
Iron	96.0	96.1	P/P	90 - 110
Magnesium	94.3	95.4	P/P	90 - 110
Magnesium	95.4	95.3	P/P	90 - 110
Potassium	94.0	94.7	P/P	90 - 110
Potassium	94.7	95.5	P/P	90 - 110
Sodium	94.2	97.3	P/P	90 - 110
Sodium	97.3	97.0	P/P	90 - 110
Zinc	99.5	101	P/P	90 - 110
Zinc	99.6	99.5	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A92692
Included Lab Sample IDs: 2100783, 2100786

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.8	99.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A92700
Included Lab Sample IDs: 2100783, 2100786, 2100789, 2100792

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.0	98.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A92704
Included Lab Sample IDs: 2100783, 2100786, 2100789, 2100792

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	109	108	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A92708
Included Lab Sample IDs: 2100782, 2100785, 2100788, 2100791

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	104	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A92708
Included Lab Sample IDs: 2100782, 2100785, 2100788, 2100791

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A92719
Included Lab Sample IDs: 2100834, 2100835

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.1	98.3	P/P	90 - 110
Copper	99.5	99.5	P/P	90 - 110
Lead	103	104	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A92724
Included Lab Sample IDs: 2100829, 2100830, 2100831

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	112	114	P/P	60 - 160
Endothall	94.0	85.7	P/P	60 - 160

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A92748
Included Lab Sample IDs: 2100834, 2100835

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Nickel	96.4	98.7	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A92756
Included Lab Sample IDs: 2100829, 2100830, 2100831

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	96.3	94.1	P/P	50 - 150
Acetaminophen	120	120	P/P	60 - 160
Acetamiprid	105	111	P/P	50 - 150
Afidopyropen	110	103	P/P	50 - 150
Bentazon	105	86.1	P/P	50 - 160
Benzovindiflupyr	111	113	P/P	50 - 150
Carbamazepine	106	107	P/P	60 - 150
Clothianidin	108	106	P/P	60 - 150
Dinotefuran	107	107	P/P	50 - 150
Diuron	112	107	P/P	60 - 150
Fenuron	99.2	106	P/P	60 - 150
Fluridone	111	113	P/P	60 - 160
Hydrocodone	103	107	P/P	60 - 150
Ibuprofen	113	119	P/P	50 - 160
Imazapyr	86.5	106	P/P	50 - 150
Imidacloprid	105	101	P/P	60 - 150
Linuron	105	104	P/P	60 - 150
Mandestrobin	104	117	P/P	50 - 150
MCPP	96.5	95.3	P/P	50 - 150
Naproxen	116	93.6	P/P	50 - 160
Primidone	106	98.4	P/P	60 - 150
Pyraclostrobin	117	117	P/P	60 - 150
Thiamethoxam	115	114	P/P	50 - 150
Tolfenpyrad	100	104	P/P	60 - 150
Triclopyr	92.4	115	P/P	50 - 150

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A92782
Included Lab Sample IDs: 2100829, 2100830, 2100831

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	84.7	89.1	P/P	60 - 160
Glufosinate	94.1	94.3	P/P	60 - 160
Glyphosate	97.9	95.2	P/P	60 - 160

Reference Method: EPA 8276
Run ID: A92816
Included Lab Sample IDs: 2100832

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	96.7		P	80 - 120
Toxaphene	95.1		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A92823
Included Lab Sample IDs: 2100834, 2100835

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	95.7	96.0	P/P	90 - 110
Antimony	96.0	93.7	P/P	90 - 110
Arsenic	97.7	96.5	P/P	90 - 110
Arsenic	98.6	97.7	P/P	90 - 110
Beryllium	98.9	98.2	P/P	90 - 110
Boron	104	105	P/P	90 - 110
Boron	105	102	P/P	90 - 110
Cadmium	96.4	97.0	P/P	90 - 110
Cadmium	97.0	94.8	P/P	90 - 110
Chromium	93.7	96.0	P/P	90 - 110
Chromium	96.0	91.7	P/P	90 - 110
Cobalt	96.7	95.7	P/P	90 - 110
Manganese	94.8	96.8	P/P	90 - 110
Molybdenum	94.8	94.4	P/P	90 - 110
Silver	96.9	95.3	P/P	90 - 110
Silver	97.1	96.9	P/P	90 - 110
Thallium	96.2	96.5	P/P	90 - 110
Thallium	96.5	92.8	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A92848
Included Lab Sample IDs: 2100828

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	84.1	129	P/P	60 - 150
Aldicarb	77.7	126	P/P	60 - 150
Aldicarb Sulfone	82.7	128	P/P	50 - 150
Aldicarb Sulfoxide	74.1	124	P/P	50 - 150
Carbaryl	80.6	121	P/P	60 - 150
Carbofuran	87.9	130	P/P	50 - 150
Methiocarb	79.3	119	P/P	50 - 150
Methomyl	81.0	131	P/P	50 - 150
Oxamyl	72.2	129	P/P	50 - 150
Propoxur	80.8	133	P/P	50 - 150

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A92879
Included Lab Sample IDs: 2100834, 2100835

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Selenium	99.4	101	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A92888
Included Lab Sample IDs: 2100832

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	94.2		P	80 - 120
Alpha-BHC	96.1		P	80 - 120
Alpha-Chlordane	94.2		P	80 - 120
Beta-BHC	97.6		P	80 - 120
Bifenthrin	87.9		P	80 - 120
Carbophenothion	99.7		P	80 - 120
Chlorothalonil	84.6		P	80 - 120
Cis-Nonachlor	91.3		P	80 - 120
Cypermethrin	93.2		P	80 - 120
DDD-p,p'	94.8		P	80 - 120
DDE-p,p'	96.1		P	80 - 120
DDT-p,p'	101		P	80 - 120
Delta-BHC	96.4		P	80 - 120
Dicofol	100		P	80 - 120
Dieldrin	96.6		P	80 - 120
Endosulfan I	92.6		P	80 - 120
Endosulfan II	89.3		P	80 - 120
Endosulfan Sulfate	94.4		P	80 - 120
Endrin	89.7		P	80 - 120
Endrin Aldehyde	88.1		P	80 - 120
Endrin Ketone	92.5		P	80 - 120
Ethalfluralin	97.1		P	80 - 120
Gamma-BHC	97.4		P	80 - 120
Gamma-Chlordane	94.5		P	80 - 120
Heptachlor	91.7		P	80 - 120
Heptachlor Epoxide	94.4		P	80 - 120
Hexachlorobenzene	97.5		P	80 - 120
Methoxychlor	96.8		P	80 - 120
Mirex	96.0		P	80 - 120
Permethrin	85.3		P	80 - 120
Trans-Nonachlor	94.1		P	80 - 120
Trifluralin	93.7		P	80 - 120

Reference Method: EPA 8270E
Run ID: A92989
Included Lab Sample IDs: 2100833

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	101		P	80 - 120
Alachlor	102		P	80 - 120
Ametryn	96.3		P	80 - 120
Atrazine	101		P	80 - 120
Atrazine Desethyl	90.5		P	80 - 120
Azinphos Methyl	93.4		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A92989
Included Lab Sample IDs: 2100833

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromacil	102		P	80 - 120
Butylate	97.5		P	80 - 120
Chlorpyrifos Ethyl	98.0		P	80 - 120
Chlorpyrifos Methyl	100		P	80 - 120
Cyanazine	94.0		P	80 - 120
Demeton	97.9		P	80 - 120
Diazinon	101		P	80 - 120
Dimethenamid	103		P	80 - 120
Disulfoton	93.5		P	80 - 120
Dithiopyr	103		P	80 - 120
EPTC	101		P	80 - 120
Ethion	98.5		P	80 - 120
Ethoprop	102		P	80 - 120
Fenamiphos	100		P	80 - 120
Fipronil	100		P	80 - 120
Fipronil Desulfinyl	103		P	80 - 120
Fipronil Sulfide	101		P	80 - 120
Fipronil Sulfone	101		P	80 - 120
Fonofos	98.9		P	80 - 120
Hexazinone	99.0		P	80 - 120
Malathion	90.3		P	80 - 120
Metalaxyl	107		P	80 - 120
Metolachlor	105		P	80 - 120
Metribuzin	93.2		P	80 - 120
Mevinphos	100		P	80 - 120
Molinate	99.6		P	80 - 120
Norflurazon	100		P	80 - 120
Oxadiazon	105		P	80 - 120
Parathion Ethyl	95.0		P	80 - 120
Parathion Methyl	97.4		P	80 - 120
Pendimethalin	99.1		P	80 - 120
Phorate	101		P	80 - 120
Prodiamine	102		P	80 - 120
Prometon	104		P	80 - 120
Prometryn	100		P	80 - 120
Simazine	96.5		P	80 - 120
Tebuconazole	103		P	80 - 120
Terbufos	98.1		P	80 - 120
Terbuthylazine	102		P	80 - 120

Reference Method: SM 5310 B-00
Run ID: A93016
Included Lab Sample IDs: 2100789, 2100792

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.6	95.0	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A93126
Included Lab Sample IDs: 2100829, 2100830, 2100831

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	117	112	P/P	60 - 160

* 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							2.44	
EPA 200.7 Rev. 4.4	Barium	97.5		90.1	99.4	96.0			9.15
	Calcium	92.3		92.7	91.9				12.2
	Iron	93.8		88.4	93.8	94.5			5.42
	Magnesium	98.3		88.4	99.0	94.4			7.32
	Potassium	96.6		89.4	95.9	96.6			5.72
	Sodium	93.5		94.1	93.3				7.02
	Zinc	96.7		91.3	99.9	99.6			8.94
EPA 200.8 Rev. 5.4	Aluminum	98.6		100	93.9	93.1			0.852
	Antimony	96.6		98.7	97.0	97.5			0.484
	Arsenic	100		103	98.8	98.8			0.0476
	Beryllium	95.9		95.1	95.3	94.3			1.02
	Boron	105		103	104	107			2.08
	Cadmium	99.3		99.3	98.6	99.1			0.512
	Chromium	95.4		93.9	96.8	96.3			0.537
	Cobalt	98.9		97.0	96.6	96.6			0.0133
	Copper	101		99.1	94.5	103			8.36
	Lead	103		107	96.6	96.3			0.331
	Manganese	96.4		94.0	96.1	96.8			0.456
	Molybdenum	95.4		101	96.1	96.5			0.412
	Nickel	104		99.6	101	102			0.609
	Selenium	102		100	97.2	99.4			2.28
	Silver	100		99.4	100	99.2			0.709
	Thallium	101		106	102	105			2.77
EPA 300.0 Rev. 2.1	Chloride	100		99.3	98.9				0.340
	Sulfate	99.5		99.1	98.9				0.185
EPA 350.1 Rev. 2.0	Ammonia-N	104		104	105				0.595
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	108		105	107				1.83
EPA 353.2 Rev. 2.0	NO2NO3-N	104		104	104				0.370
EPA 365.1 Rev. 2.0	Total-P	107		105	108				2.95
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	96.6		95.9	97.3				1.45
	O-Phosphate-P	97.2		95.7	96.4				0.729
EPA 8270E	Acetochlor	87.0	105	91.3	96.0		18.7		5.02
	Alachlor	84.6	99.3	86.7	90.5		15.9		4.28
	Aldrin	63.9	65.9	60.4	61.6		3.06		1.98
	Alpha-BHC	122	124	124	128		1.44		3.07
	Alpha-Chlordane	90.2	86.9	84.0	92.4		3.69		9.44
	Ametryn	84.8	95.8	87.3	90.1		12.2		3.11
	Atrazine	89.1	109	102	103		20.1		1.81
	Atrazine Desethyl	128	136	109	110		6.29		0.755
	Azinphos Methyl	98.6	118	97.1	103		18.2		5.96
	Beta-BHC	143	141	166	154		1.14		7.37
	Bifenthrin	79.4	72.8	76.6	81.9		8.63		6.72
	Bromacil	73.6	84.8	73.8	81.0		14.2		9.25
	Butylate	53.1	56.3	48.5	63.4		5.79		26.6
	Carbophenothion	90.3	98.6	131	113		8.82		14.9
	Chlorothalonil	147	132	175	159		10.9		9.95
	Chlorpyrifos Ethyl	85.0	102	93.3	96.6		17.9		3.44
	Chlorpyrifos Methyl	91.5	108	92.9	99.3		16.2		6.67
	Cis-Nonachlor	88.5	84.9	81.2	92.2		4.15		12.7
	Cyanazine	169	190	186	188		11.8		1.01
	Cypermethrin	83.8	81.4	79.3	89.0		2.90		11.6
	DDD-p,p'	99.3	95.2	95.2	106		4.23		10.4
	DDE-p,p'	89.5	87.5	85.7	94.0		2.23		9.25

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270E	DDT-p,p'	120	116	114	119	3.25		5.05
	Delta-BHC	152	142	171	172	7.16		0.214
	Demeton	49.5	80.0	79.2	77.9	47.1		1.69
	Diazinon	101	121	111	107	17.3		4.08
	Dicofol	98.6	92.9	90.0	92.8	5.92		3.10
	Dieldrin	99.1	95.5	93.8	102	3.69		8.47
	Dimethenamid	73.2	87.0	72.5	82.7	17.2		13.1
	Disulfoton	55.6	93.4	92.6	90.8	50.7		1.96
	Dithiopyr	89.6	106	91.5	97.1	16.4		5.98
	Endosulfan I	95.6	95.1	94.9	100	0.595		5.62
	Endosulfan II	102	102	103	111	0.0099		7.51
	Endosulfan Sulfate	94.3	90.3	87.5	94.3	4.36		7.44
	Endrin	95.7	91.5	95.7	108	4.46		12.1
	Endrin Aldehyde	104	97.9	93.1	101	5.69		8.44
	Endrin Ketone	90.5	88.9	93.2	98.5	1.78		5.49
	EPTC	53.1	52.7	55.8	65.2	0.703		15.7
	Ethalfluralin	107	99.2	103	109	7.57		5.34
	Ethion	52.5	56.9	37.9	48.1	7.90		23.6
	Ethoprop	89.7	108	99.2	100	18.2		1.25
	Fenamiphos	75.3	89.7	77.2	93.9	17.5		19.5
	Fipronil	88.2	105	89.9	97.3	17.1		7.88
	Fipronil Desulfinyl	80.0	92.4	82.3	88.8	14.4		7.56
	Fipronil Sulfide	80.3	92.3	76.5	88.4	13.9		14.5
	Fipronil Sulfone	69.1	74.4	73.9	79.0	7.28		6.76
	Fonofos	95.6	113	103	109	16.4		5.42
	Gamma-BHC	129	135	147	149	4.09		1.19
	Gamma-Chlordane	86.1	83.8	80.5	88.8	2.78		9.76
	Heptachlor	77.7	75.7	70.7	73.9	2.66		4.41
	Heptachlor Epoxide	93.9	92.4	90.3	97.4	1.66		7.49
	Hexachlorobenzene	83.0	78.6	74.1	80.7	5.46		8.55
	Hexazinone	93.9	103			9.42		0.441
	Malathion	83.6	96.2	81.7	87.7	14.0		7.11
	Metalaxyl	90.2	100	90.9	95.5	10.3		5.03
	Methoxychlor	132	129	129	131	2.27		1.28
	Metolachlor	79.2	92.8	83.1	84.3	15.9		1.49
	Metribuzin	171	218	217	222	24.6		2.54
	Mevinphos	84.4	96.5	93.6	89.1	13.4		4.91
	Mirex	65.4	64.4	61.3	65.3	1.54		6.29
	Molinate	66.2	75.8	74.8	79.4	13.6		5.98
	Norflurazon	83.1	99.2	87.7	89.5	17.6		2.07
	Oxadiazon	78.6	96.4	71.1	84.8	20.3		17.5
	Parathion Ethyl	87.7	98.1	92.3	94.2	11.3		2.01
	Parathion Methyl	95.3	107	92.1	96.5	11.5		4.67
	Pendimethalin	86.0	96.1	93.6	94.9	11.0		1.36
	Permethrin	67.1	63.4	62.7	72.0	5.65		13.9
	Phorate	69.7	85.7	91.2	76.6	20.6		17.5
	Prodiamine	39.3	43.3	44.3	49.8	9.66		11.6
	Prometon	74.2	88.2	75.3	83.5	17.3		10.4
	Prometryn	83.9	93.9	85.8	89.2	11.2		3.86
	Simazine	104	120	99.4	105	14.4		4.98
	Tebuconazole	50.7	59.3	36.7	51.2	15.5		33.1
	Terbufos	84.0	106	104	99.5	23.1		4.43
	Terbuthylazine	87.6	101	92.4	95.4	14.0		3.17
	Trans-Nonachlor	85.8	82.0	81.1	89.3	4.65		9.63

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270E	Trifluralin	103	99.8	98.6	101	3.22		2.52
EPA 8276	Chlordane	85.4	85.9	103	112	0.548		8.10
	Toxaphene	72.0	71.2	77.2	82.0	1.18		6.01
EPA 8321B	2,4-D	135		118	130			6.65
	3-Hydroxycarbofuran	101		91.0	85.2			6.60
	Acesulfame K	112		103	114			9.15
	Acetaminophen	93.3		95.7	97.8			2.11
	Acetamiprid	91.8		92.6	96.6			4.20
	Afidopyropen	75.0		86.2	85.7			0.553
	Aldicarb	112		67.3	76.5			12.7
	Aldicarb Sulfone	105		101	91.6			10.1
	Aldicarb Sulfoxide	72.0		47.6	43.0			10.3
	AMPA	90.0		46.6	43.8			1.27
	Bentazon	96.7		116	107			2.70
	Benzovindiflupyr	88.8		79.6	78.4			1.52
	Carbamazepine	90.2		73.8	76.4			3.01
	Carbaryl	85.9		62.1	57.3			6.22
	Carbofuran	105		78.1	72.2			7.80
	Clothianidin	77.5		69.4	68.4			1.29
	Dinotefuran	86.4		97.5	103			5.54
	Diuron	88.7		64.1	68.6			5.59
	Endothall	115		83.0	87.7			5.51
	Fenuron	98.6		76.5	80.4			5.07
	Fluridone	94.9		75.1	79.7			4.42
	Glufosinate	108		72.5	73.0			0.789
	Glyphosate	95.9		104	92.5			2.06
	Hydrocodone	94.7		75.3	95.3			23.4
	Ibuprofen	98.5		83.9	80.7			3.96
	Imazapyr	74.0						6.21
	Imidacloprid	91.4		146	169			10.3
	Linuron	75.0		56.7	59.8			5.32
	Mandestrobin	88.2		68.2	71.1			4.03
	MCPP	146		153	160			4.11
	Methiocarb	80.0		70.0	67.1			4.23
	Methomyl	85.9		60.9	66.9			9.41
	Naproxen	90.0		89.2	86.0			3.56
	Oxamyl	99.9		97.7	71.2			31.4
	Primidone	89.4		90.7	93.5			3.04
	Propoxur	95.3		70.7	66.3			6.38
	Pyraclostrobin	95.3		88.2	89.5			1.55
	Sucralose	46.7		76.6	86.9			11.5
	Thiamethoxam	111		149	146			1.64
	Tolfenpyrad	52.2		53.2	57.4			7.50
	Triclopyr	139		133	131			1.40
SM 2120 B	Color (true)	93.9					1.87	
	Color (true)	101					3.09	
SM 2320 B-97	Total Alkalinity	103					0.117	
SM 2540 C-97	TDS						3.19	
	TDS						5.59	
SM 4500 F-C-97	Fluoride	99.0		99.3	100			0.470
SM 5310 B-00	Organic Carbon	96.7		96.4	96.8			0.246
	Organic Carbon	95.1		93.1	92.1			0.684

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2100782, 2100785, 2100788, 2100791
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2100834, 2100835
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2100834, 2100835
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2100782, 2100785, 2100788, 2100791
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2100782, 2100785, 2100788, 2100791
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2100783, 2100786, 2100789, 2100792
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2100783, 2100786, 2100789, 2100792
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2100783, 2100786, 2100789, 2100792
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2100783, 2100786, 2100789, 2100792
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2100784, 2100787, 2100790, 2100793
EPA 8270E / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	2100832
EPA 8270E / E31780	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2100833
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2100832
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	2100828
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2100829, 2100830, 2100831
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2100829, 2100830, 2100831
SM 2120 B / E31780	True Color measured at 450 nm	2100782, 2100785, 2100788, 2100791
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2100782, 2100785, 2100788, 2100791
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2100782, 2100785, 2100788, 2100791
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2100782, 2100785, 2100788, 2100791
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2100782, 2100785, 2100788, 2100791
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2100783, 2100786, 2100789, 2100792

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	07/09/2019			07/09/2019 16:59	Samantha Davila	2100782, 2100785, 2100788, 2100791
EPA 200.7 Rev. 4.4	07/09/2019	07/09/2019 15:00	Elliott D. Healy	07/10/2019 15:19	Betina Topolski	2100834
	07/09/2019	07/09/2019 15:00	Elliott D. Healy	07/10/2019 15:58	Betina Topolski	2100835
EPA 200.8 Rev. 5.4	07/09/2019	07/09/2019 15:00	Elliott D. Healy	07/11/2019 20:46	Robert K Palmer	2100834
	07/09/2019	07/09/2019 15:00	Elliott D. Healy	07/11/2019 21:06	Robert K Palmer	2100835
	07/09/2019	07/09/2019 15:00	Elliott D. Healy	07/12/2019 16:57	Robert K Palmer	2100834
	07/09/2019	07/09/2019 15:00	Elliott D. Healy	07/12/2019 17:17	Robert K Palmer	2100835
	07/09/2019	07/09/2019 15:00	Elliott D. Healy	07/16/2019 15:27	Robert K Palmer	2100834
	07/09/2019	07/09/2019 15:00	Elliott D. Healy	07/16/2019 16:23	Robert K Palmer	2100835
	07/09/2019	07/09/2019 15:00	Elliott D. Healy	07/18/2019 16:11	Robert K Palmer	2100834
	07/09/2019	07/09/2019 15:00	Elliott D. Healy	07/18/2019 16:32	Robert K Palmer	2100835
EPA 300.0 Rev. 2.1	07/09/2019			07/10/2019 19:47	Lipi Saha	2100782
	07/09/2019			07/10/2019 21:36	Lipi Saha	2100785
	07/09/2019			07/10/2019 22:13	Lipi Saha	2100788
	07/09/2019			07/10/2019 22:25	Lipi Saha	2100791
EPA 350.1 Rev. 2.0	07/09/2019			07/10/2019 16:06	Ping Hua	2100786
	07/09/2019			07/10/2019 16:24	Ping Hua	2100783
	07/09/2019			07/10/2019 16:26	Ping Hua	2100789
	07/09/2019			07/10/2019 16:27	Ping Hua	2100792
EPA 351.2 Rev. 2.0	07/09/2019	07/10/2019 12:20	Sima Feizi	07/11/2019 10:41	Joseph Suarez	2100783
	07/09/2019	07/10/2019 12:20	Sima Feizi	07/11/2019 10:43	Joseph Suarez	2100786
	07/09/2019	07/10/2019 12:20	Sima Feizi	07/11/2019 10:44	Joseph Suarez	2100789
	07/09/2019	07/10/2019 12:20	Sima Feizi	07/11/2019 10:49	Joseph Suarez	2100792
EPA 353.2 Rev. 2.0	07/09/2019			07/10/2019 10:19	Beverly Y. Sanders	2100789
	07/09/2019			07/10/2019 10:20	Beverly Y. Sanders	2100792
	07/09/2019			07/10/2019 11:19	Beverly Y. Sanders	2100783
	07/09/2019			07/10/2019 11:20	Beverly Y. Sanders	2100786
EPA 365.1 Rev. 2.0	07/09/2019	07/10/2019 13:20	Sima Feizi	07/11/2019 11:04	Lipi Saha	2100789
	07/09/2019	07/10/2019 13:20	Sima Feizi	07/11/2019 11:05	Lipi Saha	2100783
	07/09/2019	07/10/2019 13:20	Sima Feizi	07/11/2019 11:06	Lipi Saha	2100786
	07/09/2019	07/10/2019 13:20	Sima Feizi	07/11/2019 11:07	Lipi Saha	2100792
EPA 365.1 Rev. 2.0 dissolved	07/09/2019			07/09/2019 15:40	Jhamieka S. Greenwood	2100784
	07/09/2019			07/09/2019 15:52	Jhamieka S. Greenwood	2100793
	07/09/2019			07/09/2019 15:57	Jhamieka S. Greenwood	2100787
	07/09/2019			07/09/2019 16:09	Jhamieka S. Greenwood	2100790
EPA 8270E	07/09/2019	07/12/2019 08:30	Rasheda Ghaffari	07/16/2019 15:30	Vandana T. Nagar	2100833
	07/09/2019	07/12/2019 09:00	Fe-Val Siddell	07/18/2019 21:31	Arthur Maknenko	2100832
EPA 8276	07/09/2019	07/12/2019 09:00	Fe-Val Siddell	07/16/2019 03:58	Dinesh Mishra	2100832
EPA 8321B	07/09/2019	07/11/2019 09:15	Rebecca Ware	07/11/2019 20:08	Rebecca Ware	2100829
	07/09/2019	07/11/2019 09:15	Rebecca Ware	07/11/2019 20:22	Rebecca Ware	2100830

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	07/09/2019	07/11/2019 09:15	Rebecca Ware	07/11/2019 20:35	Rebecca Ware	2100831
	07/09/2019	07/11/2019 09:15	Rebecca Ware	07/12/2019 14:31	Rebecca Ware	2100829
	07/09/2019	07/11/2019 09:15	Rebecca Ware	07/12/2019 14:41	Rebecca Ware	2100830
	07/09/2019	07/11/2019 09:15	Rebecca Ware	07/12/2019 14:52	Rebecca Ware	2100831
	07/09/2019	07/11/2019 09:15	Rebecca Ware	07/26/2019 13:37	Rebecca Ware	2100829
	07/09/2019	07/11/2019 09:15	Rebecca Ware	07/26/2019 13:49	Rebecca Ware	2100830
	07/09/2019	07/11/2019 09:15	Rebecca Ware	07/26/2019 14:01	Rebecca Ware	2100831
	07/09/2019	07/11/2019 10:00	Hoor Shaik	07/12/2019 04:49	Juyoung Kim	2100829
	07/09/2019	07/11/2019 10:00	Hoor Shaik	07/12/2019 05:24	Juyoung Kim	2100830
	07/09/2019	07/11/2019 10:00	Hoor Shaik	07/12/2019 05:58	Juyoung Kim	2100831
	07/09/2019	07/15/2019 09:00	Hoor Shaik	07/18/2019 02:52	Juyoung Kim	2100828
SM 2120 B	07/09/2019			07/09/2019 14:33	Madeline Funaro	2100782
	07/09/2019			07/09/2019 14:34	Madeline Funaro	2100785
	07/09/2019			07/09/2019 14:38	Madeline Funaro	2100788
	07/09/2019			07/09/2019 14:40	Madeline Funaro	2100791
SM 2320 B-97	07/09/2019			07/11/2019 00:00	Dale L. Simmons	2100782
	07/09/2019			07/11/2019 00:13	Dale L. Simmons	2100785
	07/09/2019			07/11/2019 00:25	Dale L. Simmons	2100788
	07/09/2019			07/11/2019 00:38	Dale L. Simmons	2100791
SM 2540 C-97	07/09/2019			07/11/2019 15:31	Yijie Li	2100782, 2100785, 2100788, 2100791
SM 2540 D-97	07/09/2019			07/11/2019 15:31	Yijie Li	2100782, 2100785, 2100788, 2100791
SM 4500 F-C-97	07/09/2019			07/11/2019 00:00	Dale L. Simmons	2100782
	07/09/2019			07/11/2019 00:13	Dale L. Simmons	2100785
	07/09/2019			07/11/2019 00:25	Dale L. Simmons	2100788
	07/09/2019			07/11/2019 00:38	Dale L. Simmons	2100791
SM 5310 B-00	07/09/2019			07/10/2019 11:04	Madeline Funaro	2100783
	07/09/2019			07/10/2019 11:22	Madeline Funaro	2100786
	07/09/2019			07/16/2019 04:30	Madeline Funaro	2100789
	07/09/2019			07/16/2019 04:44	Madeline Funaro	2100792