Chemical Analysis Report

NE-DIST-2019-02-09-01

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

Event Description: **LSJR West Boat**
Request ID: **RQ-2019-02-04-22**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Suite 100
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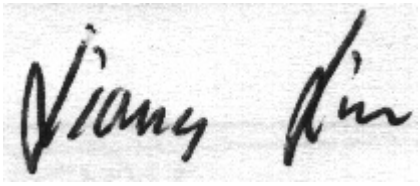
Certified by: Liang Lin, Environmental Administrator

Date Certified: 28-FEB-2019 14:39



NON-CONFORMANCE REPORT INCLUDED

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: GOODBYS CR @ SR-13 **Collection Date/Time: 02/07/2019 12:05**

Field ID: 20030518 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2061372	EPA 180.1 Rev. 2.0	Turbidity	3.0	Q	NTU	P358679	
	EPA 300.0	Bromide	0.33		mg Br/L	P358982	
	SM 2320 B-97	Total Alkalinity	64		mg CaCO3/L	P359115	
	SM 2540 D-97	TSS	2	I	mg/L	P359152	
	SM 4500 F-C-97	Fluoride	0.095	I	mg F/L	P359120	
2061373	EPA 350.1 Rev. 2.0	Ammonia-N	0.025		mg N/L	P359056	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.60		mg N/L	P358835	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.24		mg N/L	P358940	
	EPA 365.1 Rev. 2.0	Total-P	0.081		mg P/L	P358858	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P359417	
2061374	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.054	Q	mg P/L	P358814	
2061400	EPA 200.7 Rev. 4.4	Iron	430		ug/L	P358715	
		Manganese	7.1		ug/L	P358715	
		Zinc	5.0	U	ug/L	P358715	
	EPA 200.8 Rev. 5.4	Aluminum	88		ug/L	P358715	
		Antimony	0.071	I	ug/L	P358715	
		Arsenic	1.00		ug/L	P358715	
		Cadmium	0.020	U	ug/L	P358715	
		Chromium	0.45	I	ug/L	P358715	
		Copper	1.06		ug/L	P358715	
		Lead	0.39	I	ug/L	P358715	
		Nickel	0.50	U	ug/L	P358715	
		Selenium	0.20	U	ug/L	P358715	
		Silver	0.010	U	ug/L	P358715	
		Thallium	0.10	U	ug/L	P358715	

Ref. Method and Comment:
EPA 180.1 Rev. 2.0: The sample expired upon receipt.
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The sample expired upon receipt.

Sample Location: GOODBYS CR AT BAYMEADOWS **Collection Date/Time: 02/07/2019 11:50**

Field ID: 20030593 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2061375	EPA 180.1 Rev. 2.0	Turbidity	5.8	Q	NTU	P358679	
	EPA 300.0	Bromide	0.17		mg Br/L	P358982	
	SM 2120 B	Color (true)	70	AQ	PCU	P358809	
	SM 2320 B-97	Total Alkalinity	88		mg CaCO3/L	P359115	
	SM 2540 D-97	TSS	4	I	mg/L	P359152	
	SM 4500 F-C-97	Fluoride	0.099	I	mg F/L	P359120	
2061376	EPA 350.1 Rev. 2.0	Ammonia-N	0.025		mg N/L	P359056	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.63		mg N/L	P359302	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.10		mg N/L	P358940	
	EPA 365.1 Rev. 2.0	Total-P	0.073		mg P/L	P358858	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P359417	
2061377	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.024	Q	mg P/L	P358814	
2061399	EPA 8321B	2,4-D	0.058		ug/L	P358573	
		Acesulfame K**	0.10	U	ug/L	P358749	
		AMPA**	0.10	UQ	ug/L	P358749	
		Sucralose**	0.19		ug/L	P358749	
		Acetaminophen**	0.0080	U	ug/L	P358573	
		Endothall**	0.25	U	ug/L	P358749	MS
		Glufosinate**	0.10	UQ	ug/L	P358749	
		Bentazon	0.035		ug/L	P358573	
		Glyphosate**	0.13	IQ	ug/L	P358749	
		Carbamazepine**	8.0E-04	U	ug/L	P358573	
		Diuron	0.0062	I	ug/L	P358573	
		Fenuron	0.020	I	ug/L	P358573	
		Imazapyr**	0.32		ug/L	P358573	
		Imidacloprid	0.039		ug/L	P358573	MS
		Linuron	0.0040	U	ug/L	P358573	
		MCPP	0.0074	I	ug/L	P358573	
		Primidone**	0.0040	U	ug/L	P358573	
		Pyraclostrobin**	0.0020	U	ug/L	P358573	
		Triclopyr**	0.0040	U	ug/L	P358573	
		Fluridone**	0.014		ug/L	P358573	
		Hydrocodone**	0.0020	U	ug/L	P358573	
		Naproxen**	0.0080	U	ug/L	P358573	
		Ibuprofen**	0.020	U	ug/L	P358573	
2061401	EPA 200.7 Rev. 4.4	Iron	890		ug/L	P358715	
		Manganese	17.3		ug/L	P358715	
		Zinc	5.0	U	ug/L	P358715	
	EPA 200.8 Rev. 5.4	Aluminum	90		ug/L	P358715	
		Antimony	0.13	I	ug/L	P358715	
		Arsenic	1.51		ug/L	P358715	
		Cadmium	0.020	U	ug/L	P358715	
		Chromium	0.48	I	ug/L	P358715	

Field ID: 20030593 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2061401	EPA 200.8 Rev. 5.4	Copper	1.56		ug/L	P358715	
		Lead	0.45		ug/L	P358715	
		Nickel	0.50	U	ug/L	P358715	
		Selenium	0.20	U	ug/L	P358715	
		Silver	0.010	U	ug/L	P358715	
		Thallium	0.10	U	ug/L	P358715	

Ref. Method and Comment:
EPA 180.1 Rev. 2.0: The sample expired upon receipt.
SM 2120 B: The sample expired upon receipt.
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.
EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The sample expired upon receipt.
EPA 8321B: MS accuracy for imazapyr could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8321B: Some analytes analyzed beyond holding time due to technical difficulties.

Sample Location: CEDAR CR BLANDING BLVD BR RT 21 **Collection Date/Time: 02/07/2019 10:05**

Field ID: 20030083 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2061378	EPA 180.1 Rev. 2.0	Turbidity	6.4	Q	NTU	P358679	
	EPA 300.0	Bromide	0.11		mg Br/L	P358982	
	SM 2320 B-97	Total Alkalinity	83		mg CaCO3/L	P359115	
	SM 2540 D-97	TSS	7	I	mg/L	P359152	
	SM 4500 F-C-97	Fluoride	0.10		mg F/L	P359120	
2061380	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P359056	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.71		mg N/L	P359018	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.23		mg N/L	P358940	
	EPA 365.1 Rev. 2.0	Total-P	0.078		mg P/L	P358858	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P359417	
2061382	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.038	Q	mg P/L	P358814	
2061402	EPA 200.7 Rev. 4.4	Iron	520		ug/L	P358715	
		Manganese	23.3		ug/L	P358715	
		Zinc	11	I	ug/L	P358715	
	EPA 200.8 Rev. 5.4	Aluminum	177		ug/L	P358715	
		Antimony	0.25		ug/L	P358715	
		Arsenic	1.12		ug/L	P358715	
		Cadmium	0.020	U	ug/L	P358715	
		Chromium	0.63	I	ug/L	P358715	
		Copper	3.31		ug/L	P358715	
		Lead	1.52		ug/L	P358715	
		Nickel	0.63	I	ug/L	P358715	
		Selenium	0.20	U	ug/L	P358715	
		Silver	0.010	U	ug/L	P358715	
		Thallium	0.10	U	ug/L	P358715	

Ref. Method and Comment:
EPA 180.1 Rev. 2.0: The sample expired upon receipt.
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The sample expired upon receipt.

Sample Location: ORTEGA BR ROOSEVELT BLVD US 17 **Collection Date/Time: 02/07/2019 10:30**

Field ID: 20030077 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2061379	EPA 180.1 Rev. 2.0	Turbidity	7.2	AQ	NTU	P358679	
	EPA 300.0	Bromide	0.34		mg Br/L	P358982	
	SM 2320 B-97	Total Alkalinity	53		mg CaCO3/L	P359115	
	SM 2540 D-97	TSS	8	IA	mg/L	P359153	
	SM 4500 F-C-97	Fluoride	0.081	I	mg F/L	P359120	
2061381	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P359056	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.70		mg N/L	P359018	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.22		mg N/L	P358941	
	EPA 365.1 Rev. 2.0	Total-P	0.084		mg P/L	P358858	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P359417	
2061383	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.046	Q	mg P/L	P358814	
2061403	EPA 200.7 Rev. 4.4	Iron	530		ug/L	P358715	
		Manganese	11.0		ug/L	P358715	
		Zinc	6.1	I	ug/L	P358715	
	EPA 200.8 Rev. 5.4	Aluminum	234		ug/L	P358715	
		Antimony	0.11	I	ug/L	P358715	
		Arsenic	0.99		ug/L	P358715	
		Cadmium	0.020	U	ug/L	P358715	
		Chromium	0.77	I	ug/L	P358715	
		Copper	2.19		ug/L	P358715	
		Lead	0.91		ug/L	P358715	
		Nickel	0.50	U	ug/L	P358715	
		Selenium	0.20	U	ug/L	P358715	
		Silver	0.010	U	ug/L	P358715	
		Thallium	0.10	U	ug/L	P358715	

Ref. Method and Comment:
EPA 180.1 Rev. 2.0: The sample expired upon receipt.
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The sample expired upon receipt.

Sample Location: FISHING CRK AT PUBLIC BOAT RAMP OFF SEABOARD AV **Collection Date/Time: 02/07/2019 10:50**

Field ID: 20030617 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2061384	EPA 180.1 Rev. 2.0	Turbidity	5.4	Q	NTU	P358679	
	EPA 300.0 Rev. 2.1	Chloride	42		mg Cl/L	P359447	
		Sulfate	20		mg SO4/L	P359452	
	SM 2120 B	Color (true)	99	Q	PCU	P358809	
	SM 2320 B-97	Total Alkalinity	64		mg CaCO3/L	P359115	
	SM 2540 C-97	TDS	196		mg/L	P359129	
	SM 2540 D-97	TSS	4	I	mg/L	P359150	
	SM 4500 F-C-97	Fluoride	0.081	I	mg F/L	P359120	
2061385	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P359056	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.88		mg N/L	P359018	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P358941	
	EPA 365.1 Rev. 2.0	Total-P	0.094		mg P/L	P358858	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P359417	
2061386	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.034	Q	mg P/L	P358814	
2061404	EPA 200.7 Rev. 4.4	Barium	23.8		ug/L	P358715	
		Calcium	27.6		mg/L	P358715	
		Iron	560		ug/L	P358715	
		Magnesium	6.18		mg/L	P358715	
		Potassium	2.5		mg/L	P358715	
		Sodium	26.2		mg/L	P358715	
		Zinc	9.8	I	ug/L	P358715	
	EPA 200.8 Rev. 5.4	Aluminum	144		ug/L	P358715	
		Antimony	0.21		ug/L	P358715	
		Arsenic	1.08		ug/L	P358715	
		Boron**	43.7		ug/L	P358715	
		Cadmium	0.020	U	ug/L	P358715	
		Chromium	11.1		ug/L	P358715	
		Copper	2.47		ug/L	P358715	
		Lead	1.02		ug/L	P358715	
		Nickel	1.7	I	ug/L	P358715	
		Selenium	0.20	U	ug/L	P358715	
		Silver	0.010	U	ug/L	P358715	
		Thallium	0.10	U	ug/L	P358715	

Ref. Method and Comment:
EPA 180.1 Rev. 2.0: The sample expired upon receipt.
SM 2120 B: The sample expired upon receipt.
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The sample expired upon receipt.

Sample Location: GOODBYS CR @ SR-13 **Collection Date/Time: 02/07/2019 12:05**

Field ID: 20030518 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2061578	EPA 8270D	Aldrin	4.0	U	ng/L	P358685	
		Alpha-BHC	2.0	U	ng/L	P358685	
		Alpha-Chlordane	1.0	U	ng/L	P358685	
		Beta-BHC	10	U	ng/L	P358685	
		Delta-BHC	10	U	ng/L	P358685	
		Gamma-BHC	10	U	ng/L	P358685	
		Carbophenothion	12	U	ng/L	P358685	
		Chlorothalonil	2.0	UJ	ng/L	P358685	RPD
		Cypermethrin	20	U	ng/L	P358685	
		DDD-p,p'	8.1	U	ng/L	P358685	
		DDE-p,p'	8.1	U	ng/L	P358685	
		DDT-p,p'	10	U	ng/L	P358685	
		Dicofol	30	U	ng/L	P358685	
		Dieldrin	4.0	U	ng/L	P358685	
		Endosulfan I	4.0	U	ng/L	P358685	
		Endosulfan II	4.0	U	ng/L	P358685	
		Endosulfan Sulfate	2.0	U	ng/L	P358685	
		Endrin	2.0	U	ng/L	P358685	
		Endrin Aldehyde	2.0	UJ	ng/L	P358685	RPD
		Endrin Ketone	2.0	U	ng/L	P358685	
		Gamma-Chlordane	1.0	U	ng/L	P358685	
		Heptachlor	1.5	U	ng/L	P358685	
		Heptachlor Epoxide	2.0	U	ng/L	P358685	
		Methoxychlor	4.0	U	ng/L	P358685	
		Mirex	2.0	U	ng/L	P358685	
		Permethrin	10	U	ng/L	P358685	
		Trifluralin	2.5	U	ng/L	P358685	
	EPA 8276	Chlordane	5.1	U	ng/L	P358685	
		Toxaphene	30	U	ng/L	P358685	
2061579	EPA 8270D	Acetochlor	0.24	U	ng/L	P358680	
		Alachlor	0.24	U	ng/L	P358680	
		Ametryn	0.57	U	ng/L	P358680	RPD
		Atrazine	55		ng/L	P358680	
		Atrazine Desethyl	5.8	J	ng/L	P358680	RPD
		Azinphos Methyl	2.1	U	ng/L	P358680	
		Bromacil	2.4		ng/L	P358680	
		Butylate	0.38	U	ng/L	P358680	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P358680	
		Chlorpyrifos Methyl	0.094	U	ng/L	P358680	
		Cyanazine	3.1	U	ng/L	P358680	
		Demeton	6.6	U	ng/L	P358680	
		Diazinon	0.68		ng/L	P358680	
		Dimethenamid**	0.094	U	ng/L	P358680	
		Disulfoton	0.47	U	ng/L	P358680	

Field ID: 20030518 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2061579	EPA 8270D	Dithiopyr**	0.28	I	ng/L	P358680	
		EPTC	1.2	U	ng/L	P358680	
		Ethion	0.14	U	ng/L	P358680	
		Ethoprop	0.29	I	ng/L	P358680	
		Fenamiphos	0.47	U	ng/L	P358680	
		Fipronil	0.83	I	ng/L	P358680	
		Fipronil Desulfinyl**	0.50		ng/L	P358680	MS
		Fipronil Sulfide	1.0		ng/L	P358680	
		Fipronil Sulfone	2.1		ng/L	P358680	
		Fonofos	0.19	U	ng/L	P358680	
		Hexazinone	12		ng/L	P358680	
		Malathion	0.33	U	ng/L	P358680	
		Metalaxyl	3.6		ng/L	P358680	
		Metolachlor	26		ng/L	P358680	
		Metribuzin	0.79	IJ	ng/L	P358680	RPD
		Mevinphos	0.47	U	ng/L	P358680	
		Molinate	0.28	U	ng/L	P358680	
		Norflurazon	0.47	U	ng/L	P358680	
		Oxadiazon**	0.96		ng/L	P358680	
		Parathion Ethyl	0.24	U	ng/L	P358680	
		Parathion Methyl	0.52	U	ng/L	P358680	
		Pendimethalin	0.94	U	ng/L	P358680	
		Phorate	0.24	U	ng/L	P358680	
		Prodiamine**	0.87		ng/L	P358680	
		Prometon	0.85	U	ng/L	P358680	
		Prometryn	0.19	U	ng/L	P358680	
		Simazine	38		ng/L	P358680	
		Tebuconazole**	1.1	I	ng/L	P358680	
		Terbufos	0.094	U	ng/L	P358680	
		Terbuthylazine	0.40	U	ng/L	P358680	

Ref. Method and Comment:
EPA 8270D: Refer to the narrative for an explanation of QC Codes.
EPA 8270D: MS accuracy for Atrazine 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: GOODBY'S CR @ SR-13 **Collection Date/Time: 02/07/2019 12:05**

Field ID: 20030518 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2061581	EPA 8321B	2,4-D	0.023		ug/L	P358573	
		Acesulfame K**	0.10	U	ug/L	P358749	
		AMPA**	0.10	UQ	ug/L	P358749	
		Sucralose**	0.37		ug/L	P358749	
		Acetaminophen**	0.0080	U	ug/L	P358573	
		Endothall**	0.25	U	ug/L	P358749	MS
		Glufosinate**	0.10	UQ	ug/L	P358749	
		Bentazon	0.017		ug/L	P358573	
		Glyphosate**	0.10	UQ	ug/L	P358749	
		Carbamazepine**	8.0E-04	U	ug/L	P358573	
		Diuron	0.0026	I	ug/L	P358573	
		Fenuron	0.016	U	ug/L	P358573	
		Imazapyr**	0.15		ug/L	P358573	
		Imidacloprid	0.016		ug/L	P358573	MS
		Linuron	0.0040	U	ug/L	P358573	
		MCPP	0.0021	I	ug/L	P358573	
		Primidone**	0.0040	U	ug/L	P358573	
		Pyraclostrobin**	0.0020	U	ug/L	P358573	
		Triclopyr**	0.0040	U	ug/L	P358573	
		Fluridone**	0.0062		ug/L	P358573	
		Hydrocodone**	0.0020	U	ug/L	P358573	
		Naproxen**	0.0080	U	ug/L	P358573	
		Ibuprofen**	0.020	U	ug/L	P358573	

Ref. Method and Comment:
EPA 8321B: MS accuracy for imazapyr could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8321B: Some analytes analyzed beyond holding time due to technical difficulties.

Non-Conformance Report

NCR ID: 7487

Event(s)	Job(s)	Sample(s)	Test(s)
NE-DIST-2019-02-09-01			

NCR Type: SHIPPING/RECEIVING **NCR Category: Samples arrived late**

Observation: Samples arrived one or more days late by FedEx, samples received within the acceptable temperature range. Tracking number:
438550356405
475187760693
475187760682

Resolution: Customer Jeremy Parrish contacted, email correspondence attached to sample submittal forms.

Samples will be qualified as appropriate.

Authorized by/Date: Joshua Ayres 2/12/2019

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry	Colin Wright	(850) 245-8085
Biology	Cheryl Swanson	(850) 245-8177

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P358679

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P358715

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
Manganese	1.0	U	ug/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: P358715

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Boron	2.0	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: P358982

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359447

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359452

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P359056

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P358835

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P359018

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P359302

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P358940

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P358941

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P358858

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P358814

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

Reference Method: EPA 8270D
Batch ID: P358680

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270D
Batch ID: P358680

Component	Result	Code	Units
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.2	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	0.25	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 8270D
Batch ID: P358685

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
Carbophenothion	12	U	ng/L
Chlorothalonil	2.0	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270D
Batch ID: P358685

Component	Result	Code	Units
Cypermethrin	20	U	ng/L
DDD-p,p'	8.0	U	ng/L
DDE-p,p'	8.0	U	ng/L
DDT-p,p'	10	U	ng/L
Delta-BHC	10	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
Gamma-BHC	10	U	ng/L
Gamma-Chlordane	1.0	U	ng/L
Heptachlor	1.5	U	ng/L
Heptachlor Epoxide	2.0	U	ng/L
Methoxychlor	4.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Trifluralin	2.5	U	ng/L

Reference Method: EPA 8276
Batch ID: P358685

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

Reference Method: EPA 8321B
Batch ID: P358573

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	8.0E-04	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
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P358749

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: P358809

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P359115

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

Reference Method: SM 2540 C-97
Batch ID: P359129

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P359150

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P359152

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P359153

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P359120

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 5310 B-00
Batch ID: P359417

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: P358715

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	102		P	85 - 115
Calcium	105		P	85 - 115
Iron	109		P	85 - 115
Magnesium	113		P	85 - 115
Manganese	101		P	85 - 115
Potassium	110		P	85 - 115
Sodium	107		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P358715

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	101		P	85 - 115
Antimony	100		P	85 - 115
Arsenic	105		P	85 - 115
Boron	99.9		P	85 - 115
Cadmium	110		P	85 - 115
Chromium	101		P	85 - 115
Copper	101		P	85 - 115
Lead	93.5		P	85 - 115
Nickel	102		P	85 - 115
Selenium	103		P	85 - 115
Silver	103		P	85 - 115
Thallium	103		P	85 - 115

Reference Method: EPA 300.0
Batch ID: P358982

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359447

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359452

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P359056

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P358835

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P359018

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P359302

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P358940

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P358941

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P358858

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P358814

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

Reference Method: EPA 8270D
Batch ID: P358680

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	99.4	89.0	P/P	71 - 121
Alachlor	102	87.4	P/P	72 - 119
Ametryn	90.9	87.9	P/P	47 - 144
Atrazine	104	99.6	P/P	75 - 123
Atrazine Desethyl	106	56.6	P/P	45 - 133
Azinphos Methyl	126	111	P/P	66 - 165
Bromacil	68.2	63.5	P/P	43 - 123
Butylate	60.1	59.7	P/P	27 - 83.0
Chlorpyrifos Ethyl	98.0	111	P/P	70 - 117
Chlorpyrifos Methyl	98.5	88.2	P/P	71 - 120

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P358680

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cyanazine	134	103	P/P	34 - 264
Demeton	73.8	69.1	P/P	41 - 122
Diazinon	99.2	84.8	P/P	70 - 127
Dimethenamid	100	88.7	P/P	60 - 130
Disulfoton	85.4	82.8	P/P	56 - 127
Dithiopyr	99.5	87.6	P/P	60 - 130
EPTC	61.1	59.5	P/P	24 - 84.0
Ethion	90.8	96.9	P/P	53 - 132
Ethoprop	84.2	77.3	P/P	57 - 117
Fenamiphos	85.0	86.2	P/P	55 - 136
Fipronil	95.0	80.1	P/P	64 - 126
Fipronil Desulfinyl	91.2	78.9	P/P	60 - 130
Fipronil Sulfide	89.0	91.1	P/P	57 - 120
Fipronil Sulfone	78.1	75.7	P/P	52 - 115
Fonofos	86.8	88.0	P/P	61 - 121
Hexazinone	105	100	P/P	62 - 131
Malathion	93.4	105	P/P	67 - 126
Metalaxyl	97.4	77.9	P/P	54 - 128
Metolachlor	90.4	95.2	P/P	71 - 118
Metribuzin	202	87.2	P/P	42 - 221
Mevinphos	81.2	73.5	P/P	45 - 114
Molinate	65.2	62.5	P/P	33 - 91.0
Norflurazon	93.7	76.8	P/P	60 - 123
Oxadiazon	93.1	97.4	P/P	60 - 130
Parathion Ethyl	92.7	90.3	P/P	73 - 111
Parathion Methyl	104	80.0	P/P	74 - 126
Pendimethalin	85.6	81.0	P/P	63 - 131
Phorate	75.8	69.5	P/P	54 - 115
Prodiamine	62.5	78.4	P/P	60 - 130
Prometon	81.3	80.1	P/P	61 - 120
Prometryn	86.3	80.5	P/P	62 - 126
Simazine	110	97.1	P/P	75 - 126
Tebuconazole	78.2	72.7	P/P	30 - 100
Terbufos	85.1	82.3	P/P	65 - 116
Terbuthylazine	90.8	95.9	P/P	73 - 117

Reference Method: EPA 8270D
Batch ID: P358685

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	58.0	52.8	P/P	25 - 92.0
Alpha-BHC	87.6	106	P/P	49 - 130
Alpha-Chlordane	84.4	86.6	P/P	50 - 115
Beta-BHC	109	124	P/P	43 - 157
Carbophenothion	70.1	77.2	P/P	27 - 180
Chlorothalonil	118	134	P/P	10 - 216
Cypermethrin	72.6	75.7	P/P	40 - 153
DDD-p,p'	93.7	97.5	P/P	53 - 128
DDE-p,p'	86.7	88.6	P/P	48 - 116
DDT-p,p'	96.2	94.2	P/P	47 - 128
Delta-BHC	125	132	P/P	51 - 196
Dicofol	87.8	99.9	P/P	10 - 147

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P358685

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Dieldrin	89.4	91.8	P/P	48 - 128
Endosulfan I	90.3	92.1	P/P	58 - 126
Endosulfan II	85.0	95.0	P/P	50 - 150
Endosulfan Sulfate	69.6	81.6	P/P	56 - 130
Endrin	94.4	86.0	P/P	50 - 126
Endrin Aldehyde	85.5	96.7	P/P	12 - 145
Endrin Ketone	71.6	81.1	P/P	59 - 132
Gamma-BHC	115	118	P/P	50 - 155
Gamma-Chlordane	82.2	84.7	P/P	50 - 112
Heptachlor	67.4	67.0	P/P	41 - 98.0
Heptachlor Epoxide	85.1	88.7	P/P	55 - 117
Methoxychlor	104	113	P/P	55 - 133
Mirex	64.0	63.2	P/P	44 - 101
Permethrin	66.0	67.8	P/P	52 - 124
Trifluralin	85.4	91.8	P/P	10 - 201

Reference Method: EPA 8276
Batch ID: P358685

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	77.7	81.0	P/P	43 - 128
Toxaphene	57.9	66.6	P/P	38 - 140

Reference Method: EPA 8321B
Batch ID: P358573

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	60.5		P	40 - 150
Acetaminophen	82.2		P	30 - 150
Bentazon	64.9		P	30 - 150
Carbamazepine	85.2		P	40 - 150
Diuron	83.0		P	40 - 150
Fenuron	101		P	40 - 150
Fluridone	101		P	40 - 150
Hydrocodone	96.7		P	40 - 150
Ibuprofen	75.9		P	40 - 150
Imazapyr	74.4		P	40 - 150
Imidacloprid	111		P	40 - 150
Linuron	82.4		P	40 - 150
MCPP	79.2		P	40 - 150
Naproxen	70.7		P	40 - 150
Primidone	94.4		P	40 - 150
Pyraclostrobin	78.1		P	40 - 150
Triclopyr	50.5		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P358749

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	112		P	40 - 150
AMPA	103		P	40 - 150
Endothall	100		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P358749

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glufosinate	94.1		P	40 - 150
Glyphosate	107		P	40 - 140
Sucralose	99.4		P	40 - 150

Reference Method: SM 2120 B
Batch ID: P358809

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.7		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P359115

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P359120

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.0		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P359417

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.8		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P358715

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061038	Barium	101		P	80 - 120
2061038	Calcium	103		P	80 - 120
2061038	Iron	107		P	80 - 120
2061038	Magnesium	102		P	80 - 120
2061038	Manganese	99.5		P	80 - 120
2061038	Potassium	108		P	80 - 120
2061038	Sodium	108		P	80 - 120
2061038	Zinc	101		P	80 - 120
2061045	Barium	104	102	P/P	80 - 120
2061045	Calcium	102		P	80 - 120
2061045	Iron	108	105	P/P	80 - 120
2061045	Magnesium	111	108	P/P	80 - 120
2061045	Manganese	103	102	P/P	80 - 120
2061045	Potassium	106	102	P/P	80 - 120
2061045	Sodium	107		P	80 - 120
2061045	Zinc	106	104	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P358715

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061038	Aluminum	99.4		P	80 - 120
2061038	Antimony	102		P	80 - 120
2061038	Arsenic	103		P	80 - 120
2061038	Boron	104		P	80 - 120
2061038	Cadmium	109		P	80 - 120
2061038	Chromium	99.8		P	80 - 120
2061038	Copper	98.0		P	80 - 120
2061038	Lead	98.3		P	80 - 120
2061038	Nickel	98.5		P	80 - 120
2061038	Selenium	101		P	80 - 120
2061038	Silver	104		P	80 - 120
2061038	Thallium	111		P	80 - 120
2061045	Aluminum	102	100	P/P	80 - 120
2061045	Antimony	103	101	P/P	80 - 120
2061045	Arsenic	103	102	P/P	80 - 120
2061045	Boron	110	109	P/P	80 - 120
2061045	Cadmium	112	110	P/P	80 - 120
2061045	Chromium	103	100	P/P	80 - 120
2061045	Copper	99.4	97.8	P/P	80 - 120
2061045	Lead	98.4	97.7	P/P	80 - 120
2061045	Nickel	101	98.7	P/P	80 - 120
2061045	Selenium	99.5	98.1	P/P	80 - 120
2061045	Silver	104	103	P/P	80 - 120
2061045	Thallium	110	111	P/P	80 - 120

Reference Method: EPA 300.0
Batch ID: P358982

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2058620	Bromide	96.0		P	90 - 110
2061372	Bromide	96.0		P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359447

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061149	Chloride	97.4		P	90 - 110
2061384	Chloride	96.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359452

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061149	Sulfate	96.7		P	90 - 110
2061384	Sulfate	98.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P359056

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2060781	Ammonia-N	101	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P358835

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061195	Kjeldahl Nitrogen	100	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P359018

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061585	Kjeldahl Nitrogen	107	99.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P358940

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061196	NO2NO3-N	101	99.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P358941

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061381	NO2NO3-N	97.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P358858

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061198	Total-P	104	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P358814

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061677	O-Phosphate-P	95.1	96.1	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P358680

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061294	Acetochlor	81.3	84.8	P/P	63 - 129
2061294	Alachlor	84.6	88.1	P/P	65 - 127
2061294	Ametryn	130	92.7	P/P	40 - 164
2061294	Atrazine Desethyl	97.4	96.9	P/P	14 - 157
2061294	Azinphos Methyl	105	111	P/P	49 - 180
2061294	Bromacil	79.2	76.9	P/P	48 - 130
2061294	Butylate	66.6	55.2	P/P	10 - 94.0
2061294	Chlorpyrifos Ethyl	86.7	91.2	P/P	58 - 123
2061294	Chlorpyrifos Methyl	94.4	90.7	P/P	58 - 125
2061294	Cyanazine	147	135	P/P	24 - 253
2061294	Demeton	106	84.4	P/P	25 - 149
2061294	Diazinon	101	102	P/P	59 - 144
2061294	Dimethenamid	82.8	85.9	P/P	60 - 130
2061294	Disulfoton	104	102	P/P	54 - 132
2061294	Dithiopyr	89.3	93.7	P/P	60 - 130
2061294	EPTC	65.5	50.9	P/P	10 - 92.0
2061294	Ethion	92.0	89.3	P/P	30 - 148
2061294	Ethoprop	102	96.4	P/P	50 - 130
2061294	Fenamiphos	92.1	77.1	P/P	49 - 142
2061294	Fipronil	81.8	71.8	P/P	46 - 140
2061294	Fipronil Desulfinyl	67.1	60.0	P/F	60 - 130
2061294	Fipronil Sulfide	66.2	54.9	P/P	31 - 136
2061294	Fipronil Sulfone	50.5	35.4	P/P	16 - 136
2061294	Fonofos	105	96.9	P/P	55 - 129
2061294	Hexazinone	113	110	P/P	56 - 141
2061294	Malathion	80.1	80.4	P/P	56 - 135
2061294	Metalaxyl	89.8	86.6	P/P	54 - 135
2061294	Metolachlor	81.4	84.9	P/P	51 - 140
2061294	Metribuzin	216	217	P/P	45 - 254
2061294	Mevinphos	104	96.5	P/P	33 - 131
2061294	Molinate	62.9	59.7	P/P	14 - 98.0
2061294	Norflurazon	79.3	67.8	P/P	34 - 136
2061294	Oxadiazon	82.8	85.5	P/P	60 - 130
2061294	Parathion Ethyl	92.0	87.1	P/P	66 - 118
2061294	Parathion Methyl	106	104	P/P	64 - 136
2061294	Pendimethalin	100	94.1	P/P	59 - 144
2061294	Phorate	94.5	77.8	P/P	42 - 130
2061294	Prodiamine	67.3	67.0	P/P	60 - 130
2061294	Prometon	76.0	76.1	P/P	59 - 134
2061294	Prometryn	82.2	78.2	P/P	54 - 135
2061294	Simazine	126	133	P/P	53 - 156
2061294	Tebuconazole	69.4	65.5	P/P	30 - 100
2061294	Terbufos	107	96.0	P/P	57 - 131
2061294	Terbuthylazine	85.2	82.4	P/P	68 - 125

Reference Method: EPA 8270D
Batch ID: P358685

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061578	Aldrin	68.8	64.4	P/P	25 - 92.0
2061578	Alpha-BHC	117	101	P/P	49 - 130
2061578	Alpha-Chlordane	82.7	78.2	P/P	50 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P358685

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061578	Beta-BHC	89.9	83.8	P/P	43 - 157
2061578	Carbophenothion	94.7	93.5	P/P	27 - 180
2061578	Chlorothalonil	71.0	172	P/P	10 - 216
2061578	Cypermethrin	81.0	83.0	P/P	40 - 153
2061578	DDD-p,p'	85.1	81.1	P/P	53 - 128
2061578	DDE-p,p'	80.4	76.7	P/P	48 - 116
2061578	DDT-p,p'	117	96.6	P/P	47 - 128
2061578	Delta-BHC	143	118	P/P	51 - 196
2061578	Dicofol	78.0	77.2	P/P	10 - 147
2061578	Dieldrin	84.5	80.6	P/P	48 - 128
2061578	Endosulfan I	85.3	87.3	P/P	58 - 126
2061578	Endosulfan II	103	96.1	P/P	50 - 150
2061578	Endosulfan Sulfate	75.3	74.5	P/P	56 - 130
2061578	Endrin	85.1	84.5	P/P	50 - 126
2061578	Endrin Aldehyde	58.7	86.3	P/P	12 - 145
2061578	Endrin Ketone	78.1	74.9	P/P	59 - 132
2061578	Gamma-BHC	123	109	P/P	50 - 155
2061578	Gamma-Chlordane	82.9	77.9	P/P	50 - 112
2061578	Heptachlor	74.3	69.8	P/P	41 - 98.0
2061578	Heptachlor Epoxide	88.9	84.9	P/P	55 - 117
2061578	Methoxychlor	91.5	101	P/P	55 - 133
2061578	Mirex	67.7	65.4	P/P	44 - 101
2061578	Permethrin	81.9	81.5	P/P	52 - 124
2061578	Trifluralin	93.1	87.7	P/P	10 - 201

Reference Method: EPA 8276
Batch ID: P358685

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2062407	Chlordane	62.7	54.7	P/P	34 - 136
2062407	Toxaphene	50.5	39.4	P/P	22 - 152

Reference Method: EPA 8321B
Batch ID: P358573

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061239	2,4-D	70.1	65.3	P/P	40 - 150
2061239	Acetaminophen	118	116	P/P	30 - 150
2061239	Bentazon	36.7	36.3	P/P	30 - 150
2061239	Carbamazepine	71.9	74.9	P/P	40 - 150
2061239	Diuron	62.4	66.4	P/P	40 - 150
2061239	Fenuron	83.3	80.6	P/P	40 - 150
2061239	Fluridone	80.8	87.0	P/P	40 - 150
2061239	Hydrocodone	78.8	79.7	P/P	40 - 150
2061239	Ibuprofen	87.9	87.0	P/P	40 - 150
2061239	Imidacloprid	184	167	F/F	40 - 150
2061239	Linuron	66.6	70.5	P/P	40 - 150
2061239	MCPP	88.5	79.5	P/P	40 - 150
2061239	Naproxen	51.7	50.3	P/P	40 - 150
2061239	Primidone	109	102	P/P	40 - 150
2061239	Pyraclostrobin	78.7	76.3	P/P	40 - 150
2061239	Triclopyr	47.4	40.6	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P358749

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061239	Acesulfame K	71.3	72.6	P/P	40 - 150
2061239	Endothall	25.1	20.9	F/F	40 - 150
2061239	Sucralose	101	109	P/P	40 - 150
2061887	AMPA	94.0	92.8	P/P	40 - 150
2061887	Glufosinate	80.5	85.4	P/P	40 - 150
2061887	Glyphosate	89.8	89.1	P/P	40 - 140

Reference Method: SM 4500 F-C-97
Batch ID: P359120

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061983	Fluoride	97.0	97.0	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P359417

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061196	Organic Carbon	96.3	94.6	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P358679

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061379	Turbidity	4.74	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P358715

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061045	Barium	1.14	Spike	P	0 - 20
2061045	Calcium	2.04	Spike	P	0 - 20
2061045	Iron	2.25	Spike	P	0 - 20
2061045	Magnesium	2.35	Spike	P	0 - 20
2061045	Manganese	1.17	Spike	P	0 - 20
2061045	Potassium	2.85	Spike	P	0 - 20
2061045	Sodium	3.02	Spike	P	0 - 20
2061045	Zinc	1.53	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P358715

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061045	Aluminum	1.49	Spike	P	0 - 20
2061045	Antimony	1.74	Spike	P	0 - 20
2061045	Arsenic	0.756	Spike	P	0 - 20
2061045	Boron	1.27	Spike	P	0 - 20
2061045	Cadmium	2.28	Spike	P	0 - 20
2061045	Chromium	2.89	Spike	P	0 - 20
2061045	Copper	1.60	Spike	P	0 - 20
2061045	Lead	0.739	Spike	P	0 - 20
2061045	Nickel	2.19	Spike	P	0 - 20
2061045	Selenium	1.37	Spike	P	0 - 20
2061045	Silver	1.10	Spike	P	0 - 20
2061045	Thallium	0.462	Spike	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P358982

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2058620	Bromide	0.790	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359447

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061149	Chloride	0.0772	Sample	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359452

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061149	Sulfate	0.0441	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P359056

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2060781	Ammonia-N	0.658	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P358835

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061195	Kjeldahl Nitrogen	1.18	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P359018

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061585	Kjeldahl Nitrogen	4.54	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P359302

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2063826	Kjeldahl Nitrogen	0.455	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P358940

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061196	NO2NO3-N	0.858	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P358941

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061381	NO2NO3-N	0.243	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P358858

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061198	Total-P	2.39	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P358814

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061677	O-Phosphate-P	0.845	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P358680

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061294	Acetochlor	4.18	Spike	P	0 - 30
2061294	Alachlor	4.02	Spike	P	0 - 30
2061294	Ametryn	33.5	Spike	F	0 - 30
2061294	Atrazine	1.35	Spike	P	0 - 30
2061294	Atrazine Desethyl	0.408	Spike	P	0 - 30
2061294	Azinphos Methyl	4.84	Spike	P	0 - 30
2061294	Bromacil	2.99	Spike	P	0 - 30
2061294	Butylate	18.6	Spike	P	0 - 30
2061294	Chlorpyrifos Ethyl	5.06	Spike	P	0 - 30
2061294	Chlorpyrifos Methyl	3.98	Spike	P	0 - 30
2061294	Cyanazine	8.64	Spike	P	0 - 30
2061294	Demeton	22.3	Spike	P	0 - 30
2061294	Diazinon	0.732	Spike	P	0 - 30
2061294	Dimethenamid	3.67	Spike	P	0 - 30
2061294	Disulfoton	1.16	Spike	P	0 - 30
2061294	Dithiopyr	4.76	Spike	P	0 - 30
2061294	EPTC	25.1	Spike	P	0 - 30
2061294	Ethion	2.96	Spike	P	0 - 30
2061294	Ethoprop	5.52	Spike	P	0 - 30
2061294	Fenamiphos	17.7	Spike	P	0 - 30
2061294	Fipronil	12.9	Spike	P	0 - 30
2061294	Fipronil Desulfinyl	10.1	Spike	P	0 - 30
2061294	Fipronil Sulfide	14.3	Spike	P	0 - 30
2061294	Fipronil Sulfone	19.3	Spike	P	0 - 30
2061294	Fonofos	7.75	Spike	P	0 - 30
2061294	Hexazinone	3.06	Spike	P	0 - 30
2061294	Malathion	0.437	Spike	P	0 - 30
2061294	Metalaxyl	3.68	Spike	P	0 - 30
2061294	Metolachlor	4.18	Spike	P	0 - 30
2061294	Metribuzin	0.452	Spike	P	0 - 30
2061294	Mevinphos	7.29	Spike	P	0 - 30
2061294	Molinate	5.27	Spike	P	0 - 30
2061294	Norflurazon	15.6	Spike	P	0 - 30
2061294	Oxadiazon	2.71	Spike	P	0 - 30
2061294	Parathion Ethyl	5.45	Spike	P	0 - 30
2061294	Parathion Methyl	1.81	Spike	P	0 - 30
2061294	Pendimethalin	6.30	Spike	P	0 - 30
2061294	Phorate	19.4	Spike	P	0 - 30
2061294	Prodiamine	0.444	Spike	P	0 - 30
2061294	Prometon	0.0937	Spike	P	0 - 30
2061294	Prometryn	4.94	Spike	P	0 - 30
2061294	Simazine	4.93	Spike	P	0 - 30
2061294	Tebuconazole	5.78	Spike	P	0 - 30
2061294	Terbufos	11.1	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P358680

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061294	Terbuthylazine	3.31	Spike	P	0 - 30
LFB	Acetochlor	11.0	LCS	P	0 - 30
LFB	Alachlor	15.7	LCS	P	0 - 30
LFB	Ametryn	3.36	LCS	P	0 - 30
LFB	Atrazine	4.00	LCS	P	0 - 30
LFB	Atrazine Desethyl	60.9	LCS	F	0 - 30
LFB	Azinphos Methyl	13.2	LCS	P	0 - 30
LFB	Bromacil	7.00	LCS	P	0 - 30
LFB	Butylate	0.553	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	12.3	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	11.1	LCS	P	0 - 30
LFB	Cyanazine	26.2	LCS	P	0 - 30
LFB	Demeton	6.67	LCS	P	0 - 30
LFB	Diazinon	15.7	LCS	P	0 - 30
LFB	Dimethenamid	12.2	LCS	P	0 - 30
LFB	Disulfoton	3.09	LCS	P	0 - 30
LFB	Dithiopyr	12.8	LCS	P	0 - 30
LFB	EPTC	2.65	LCS	P	0 - 30
LFB	Ethion	6.53	LCS	P	0 - 30
LFB	Ethoprop	8.59	LCS	P	0 - 30
LFB	Fenamiphos	1.40	LCS	P	0 - 30
LFB	Fipronil	17.0	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	14.4	LCS	P	0 - 30
LFB	Fipronil Sulfide	2.43	LCS	P	0 - 30
LFB	Fipronil Sulfone	3.22	LCS	P	0 - 30
LFB	Fonofos	1.32	LCS	P	0 - 30
LFB	Hexazinone	4.89	LCS	P	0 - 30
LFB	Malathion	12.0	LCS	P	0 - 30
LFB	Metalaxyl	22.2	LCS	P	0 - 30
LFB	Metolachlor	5.15	LCS	P	0 - 30
LFB	Metribuzin	79.3	LCS	F	0 - 30
LFB	Mevinphos	9.91	LCS	P	0 - 30
LFB	Molinate	4.23	LCS	P	0 - 30
LFB	Norflurazon	19.8	LCS	P	0 - 30
LFB	Oxadiazon	4.56	LCS	P	0 - 30
LFB	Parathion Ethyl	2.68	LCS	P	0 - 30
LFB	Parathion Methyl	26.6	LCS	P	0 - 30
LFB	Pendimethalin	5.49	LCS	P	0 - 30
LFB	Phorate	8.66	LCS	P	0 - 30
LFB	Prodiamine	22.5	LCS	P	0 - 30
LFB	Prometon	1.53	LCS	P	0 - 30
LFB	Prometryn	6.93	LCS	P	0 - 30
LFB	Simazine	12.3	LCS	P	0 - 30
LFB	Tebuconazole	7.35	LCS	P	0 - 30
LFB	Terbufos	3.35	LCS	P	0 - 30
LFB	Terbuthylazine	5.45	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P358685

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061578	Aldrin	6.58	Spike	P	0 - 30
2061578	Alpha-BHC	15.0	Spike	P	0 - 30
2061578	Alpha-Chlordane	5.61	Spike	P	0 - 30
2061578	Beta-BHC	7.02	Spike	P	0 - 30
2061578	Carbophenothion	1.23	Spike	P	0 - 30
2061578	Chlorothalonil	82.9	Spike	F	0 - 30
2061578	Cypermethrin	2.46	Spike	P	0 - 30
2061578	DDD-p,p'	4.87	Spike	P	0 - 30
2061578	DDE-p,p'	4.62	Spike	P	0 - 30
2061578	DDT-p,p'	19.4	Spike	P	0 - 30
2061578	Delta-BHC	18.9	Spike	P	0 - 30
2061578	Dicofol	1.03	Spike	P	0 - 30
2061578	Dieldrin	4.71	Spike	P	0 - 30
2061578	Endosulfan I	2.36	Spike	P	0 - 30
2061578	Endosulfan II	6.88	Spike	P	0 - 30
2061578	Endosulfan Sulfate	1.14	Spike	P	0 - 30
2061578	Endrin	0.778	Spike	P	0 - 30
2061578	Endrin Aldehyde	38.1	Spike	F	0 - 30
2061578	Endrin Ketone	4.16	Spike	P	0 - 30
2061578	Gamma-BHC	12.0	Spike	P	0 - 30
2061578	Gamma-Chlordane	6.31	Spike	P	0 - 30
2061578	Heptachlor	6.25	Spike	P	0 - 30
2061578	Heptachlor Epoxide	4.62	Spike	P	0 - 30
2061578	Methoxychlor	9.46	Spike	P	0 - 30
2061578	Mirex	3.46	Spike	P	0 - 30
2061578	Permethrin	0.557	Spike	P	0 - 30
2061578	Trifluralin	6.06	Spike	P	0 - 30
LFB	Aldrin	9.34	LCS	P	0 - 30
LFB	Alpha-BHC	19.2	LCS	P	0 - 30
LFB	Alpha-Chlordane	2.57	LCS	P	0 - 30
LFB	Beta-BHC	13.2	LCS	P	0 - 30
LFB	Carbophenothion	9.70	LCS	P	0 - 30
LFB	Chlorothalonil	12.4	LCS	P	0 - 30
LFB	Cypermethrin	4.21	LCS	P	0 - 30
LFB	DDD-p,p'	3.96	LCS	P	0 - 30
LFB	DDE-p,p'	2.17	LCS	P	0 - 30
LFB	DDT-p,p'	2.06	LCS	P	0 - 30
LFB	Delta-BHC	6.01	LCS	P	0 - 30
LFB	Dicofol	12.9	LCS	P	0 - 30
LFB	Dieldrin	2.65	LCS	P	0 - 30
LFB	Endosulfan I	1.92	LCS	P	0 - 30
LFB	Endosulfan II	11.1	LCS	P	0 - 30
LFB	Endosulfan Sulfate	15.9	LCS	P	0 - 30
LFB	Endrin	9.21	LCS	P	0 - 30
LFB	Endrin Aldehyde	12.4	LCS	P	0 - 30
LFB	Endrin Ketone	12.5	LCS	P	0 - 30
LFB	Gamma-BHC	2.07	LCS	P	0 - 30
LFB	Gamma-Chlordane	2.95	LCS	P	0 - 30
LFB	Heptachlor	0.494	LCS	P	0 - 30
LFB	Heptachlor Epoxide	4.08	LCS	P	0 - 30
LFB	Methoxychlor	7.88	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P358685

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Mirex	1.14	LCS	P	0 - 30
LFB	Permethrin	2.72	LCS	P	0 - 30
LFB	Trifluralin	7.25	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P358685

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2062407	Chlordane	13.6	Spike	P	0 - 30
2062407	Toxaphene	24.8	Spike	P	0 - 30
LFB	Chlordane	4.23	LCS	P	0 - 30
LFB	Toxaphene	13.8	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P358573

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061239	2,4-D	4.88	Spike	P	0 - 30
2061239	Acetaminophen	2.21	Spike	P	0 - 30
2061239	Bentazon	0.308	Spike	P	0 - 30
2061239	Carbamazepine	3.99	Spike	P	0 - 30
2061239	Diuron	5.81	Spike	P	0 - 30
2061239	Fenuron	3.35	Spike	P	0 - 30
2061239	Fluridone	3.32	Spike	P	0 - 30
2061239	Hydrocodone	1.14	Spike	P	0 - 30
2061239	Ibuprofen	1.12	Spike	P	0 - 30
2061239	Imazapyr	24.4	Spike	P	0 - 30
2061239	Imidacloprid	7.98	Spike	P	0 - 30
2061239	Linuron	5.72	Spike	P	0 - 30
2061239	MCPP	10.6	Spike	P	0 - 30
2061239	Naproxen	2.75	Spike	P	0 - 30
2061239	Primidone	6.24	Spike	P	0 - 30
2061239	Pyraclostrobin	3.10	Spike	P	0 - 30
2061239	Triclopyr	15.6	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P358749

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061239	Acesulfame K	1.72	Spike	P	0 - 30
2061239	Endothall	18.5	Spike	P	0 - 30
2061239	Sucralose	5.41	Spike	P	0 - 30
2061887	AMPA	1.37	Spike	P	0 - 30
2061887	Glufosinate	5.80	Spike	P	0 - 30
2061887	Glyphosate	0.769	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: SM 2120 B
Batch ID: P358809

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061375	Color (true)	1.26	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P359115

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061983	Total Alkalinity	0.0959	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P359129

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061194	TDS	4.53	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P359120

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061983	Fluoride	0.0	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P359417

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061196	Organic Carbon	1.32	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: 2061399
Field Sample ID: 20030593

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	85.1	P	30 - 160
EPA 8321B	Acetaminophen-d4	111	P	30 - 160
EPA 8321B	Carbamazepine-d10	65.5	P	30 - 160
EPA 8321B	Diuron-d6	62.0	P	30 - 160
EPA 8321B	Endothall-d6	101	P	40 - 160
EPA 8321B	Endothall-d6	101	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	56.1	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	56.1	P	40 - 160
EPA 8321B	Ibuprofen-d3	68.8	P	30 - 160
EPA 8321B	Primidone-d5	101	P	30 - 160
EPA 8321B	Sucralose-d6	108	P	40 - 160
EPA 8321B	Sucralose-d6	108	P	40 - 160

Lab Sample ID: 2061578
Field Sample ID: 20030518

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	81.5	P	39 - 109
EPA 8270D	Tetrachloro-m-xylene	64.6	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	49.4	P	30 - 103
EPA 8276	PCNB	72.4	P	37 - 143

Lab Sample ID: 2061579
Field Sample ID: 20030518

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	118	P	68 - 130
EPA 8270D	Terbufos-d10	104	P	61 - 136

Lab Sample ID: 2061581
Field Sample ID: 20030518

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	90.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	104	P	30 - 160
EPA 8321B	Carbamazepine-d10	66.8	P	30 - 160
EPA 8321B	Diuron-d6	66.3	P	30 - 160
EPA 8321B	Endothall-d6	120	P	40 - 160
EPA 8321B	Endothall-d6	120	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	43.4	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	43.4	P	40 - 160
EPA 8321B	Ibuprofen-d3	83.2	P	30 - 160
EPA 8321B	Primidone-d5	103	P	30 - 160
EPA 8321B	Sucralose-d6	97.4	P	40 - 160
EPA 8321B	Sucralose-d6	97.4	P	40 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A89332
Included Lab Sample IDs: 2061372, 2061375, 2061378, 2061379, 2061384

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	101	P/P	95 - 105

Reference Method: SM 2120 B
Run ID: A89379
Included Lab Sample IDs: 2061375, 2061384

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.9	101	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A89380
Included Lab Sample IDs: 2061374, 2061377, 2061382, 2061383, 2061386

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.8	96.5	P/P	90 - 110
O-Phosphate-P	98.5	97.8	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A89387
Included Lab Sample IDs: 2061400, 2061401, 2061402, 2061403, 2061404

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	99.5	99.2	P/P	90 - 110
Calcium	97.8	98.5	P/P	90 - 110
Iron	99.3	99.8	P/P	90 - 110
Iron	99.8	99.8	P/P	90 - 110
Magnesium	99.6	99.4	P/P	90 - 110
Manganese	102	102	P/P	90 - 110
Potassium	97.7	98.8	P/P	90 - 110
Sodium	100	99.8	P/P	90 - 110
Zinc	100	101	P/P	90 - 110
Zinc	101	100	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A89405
Included Lab Sample IDs: 2061400, 2061401, 2061402, 2061403, 2061404

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	103	106	P/P	90 - 110
Aluminum	106	106	P/P	90 - 110
Antimony	102	105	P/P	90 - 110
Antimony	105	105	P/P	90 - 110
Arsenic	102	103	P/P	90 - 110
Arsenic	102	102	P/P	90 - 110
Chromium	105	105	P/P	90 - 110
Chromium	105	106	P/P	90 - 110
Copper	106	107	P/P	90 - 110
Copper	106	106	P/P	90 - 110
Lead	101	102	P/P	90 - 110
Lead	102	104	P/P	90 - 110
Nickel	104	105	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A89405
Included Lab Sample IDs: 2061400, 2061401, 2061402, 2061403, 2061404

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Nickel	104	104	P/P	90 - 110
Selenium	103	104	P/P	90 - 110
Selenium	103	103	P/P	90 - 110
Silver	107	107	P/P	90 - 110
Silver	107	108	P/P	90 - 110
Thallium	103	104	P/P	90 - 110
Thallium	104	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A89410
Included Lab Sample IDs: 2061373, 2061376, 2061380, 2061381, 2061385

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A89422
Included Lab Sample IDs: 2061373, 2061376, 2061380, 2061381, 2061385

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A89432
Included Lab Sample IDs: 2061373

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

Reference Method: EPA 8270D
Run ID: A89434
Included Lab Sample IDs: 2061579

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	101		P	80 - 120
Alachlor	107		P	80 - 120
Ametryn	104		P	80 - 120
Atrazine Desethyl	97.3		P	80 - 120
Azinphos Methyl	103		P	80 - 120
Bromacil	102		P	80 - 120
Butylate	101		P	80 - 120
Chlorpyrifos Ethyl	102		P	80 - 120
Chlorpyrifos Methyl	96.8		P	80 - 120
Cyanazine	101		P	80 - 120
Demeton	97.3		P	80 - 120
Diazinon	96.8		P	80 - 120
Dimethenamid	99.3		P	80 - 120
Disulfoton	98.9		P	80 - 120
Dithiopyr	106		P	80 - 120
EPTC	101		P	80 - 120
Ethion	95.4		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270D
Run ID: A89434
Included Lab Sample IDs: 2061579

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ethoprop	99.9		P	80 - 120
Fenamiphos	105		P	80 - 120
Fipronil	102		P	80 - 120
Fipronil Desulfinyl	105		P	80 - 120
Fipronil Sulfide	105		P	80 - 120
Fipronil Sulfone	106		P	80 - 120
Fonofos	99.0		P	80 - 120
Hexazinone	99.5		P	80 - 120
Malathion	97.3		P	80 - 120
Metalaxyl	102		P	80 - 120
Metolachlor	104		P	80 - 120
Metribuzin	82.6		P	80 - 120
Mevinphos	99.3		P	80 - 120
Molinate	101		P	80 - 120
Norflurazon	107		P	80 - 120
Oxadiazon	106		P	80 - 120
Parathion Ethyl	99.8		P	80 - 120
Parathion Methyl	89.0		P	80 - 120
Pendimethalin	86.7		P	80 - 120
Phorate	96.2		P	80 - 120
Prodiamine	106		P	80 - 120
Prometon	98.7		P	80 - 120
Prometryn	102		P	80 - 120
Simazine	105		P	80 - 120
Tebuconazole	106		P	80 - 120
Terbufos	97.1		P	80 - 120
Terbuthylazine	99.5		P	80 - 120

Reference Method: EPA 300.0
Run ID: A89435
Included Lab Sample IDs: 2061372, 2061375, 2061378, 2061379

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	96.0	98.5	P/P	90 - 110
Bromide	99.0	102	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A89461
Included Lab Sample IDs: 2061399, 2061581

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	105	84.8	P/P	60 - 160
Sucralose	84.8	97.5	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A89467
Included Lab Sample IDs: 2061373, 2061376, 2061380, 2061381, 2061385

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	101	P/P	90 - 110
Ammonia-N	102	100	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A89470
Included Lab Sample IDs: 2061400, 2061401, 2061402, 2061403, 2061404

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Boron	102	97.4	P/P	90 - 110
Cadmium	100	95.6	P/P	90 - 110
Cadmium	96.9	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A89481
Included Lab Sample IDs: 2061380, 2061381, 2061385

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	98.7	P/P	90 - 110
Kjeldahl Nitrogen	98.7	103	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A89490
Included Lab Sample IDs: 2061372, 2061375, 2061378, 2061379, 2061384

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	99.3	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A89490
Included Lab Sample IDs: 2061372, 2061375, 2061378, 2061379, 2061384

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	97.6	95.8	P/P	90 - 110

Reference Method: EPA 8276
Run ID: A89496
Included Lab Sample IDs: 2061578

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Toxaphene	91.8		P	80 - 120

Reference Method: EPA 8321B
Run ID: A89502
Included Lab Sample IDs: 2061399, 2061581

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	80.2	83.8	P/P	50 - 150
Acetaminophen	111	104	P/P	60 - 160
Bentazon	74.6	79.6	P/P	50 - 160
Carbamazepine	98.4	97.9	P/P	60 - 150
Diuron	89.5	97.1	P/P	60 - 150
Fenuron	97.0	95.0	P/P	60 - 150
Fluridone	104	106	P/P	60 - 160
Hydrocodone	98.7	81.1	P/P	60 - 150
Ibuprofen	82.8	90.6	P/P	50 - 160
Imazapyr	63.5	76.3	P/P	50 - 150
Imidacloprid	93.7	98.6	P/P	60 - 150
Linuron	104	101	P/P	60 - 150
MCPP	87.0	89.2	P/P	50 - 150

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A89502
Included Lab Sample IDs: 2061399, 2061581

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Naproxen	93.1	112	P/P	50 - 160
Primidone	91.5	101	P/P	60 - 150
Pyraclostrobin	111	109	P/P	60 - 150
Triclopyr	82.1	91.2	P/P	50 - 150

Reference Method: EPA 8270D
Run ID: A89546
Included Lab Sample IDs: 2061578

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	94.4		P	80 - 120
Alpha-BHC	97.0		P	80 - 120
Alpha-Chlordane	95.8		P	80 - 120
Beta-BHC	89.7		P	80 - 120
Carbophenothion	89.7		P	80 - 120
Chlorothalonil	97.0		P	80 - 120
Cypermethrin	87.9		P	80 - 120
DDD-p,p'	98.5		P	80 - 120
DDE-p,p'	97.6		P	80 - 120
DDT-p,p'	101		P	80 - 120
Delta-BHC	90.6		P	80 - 120
Dicofol	99.6		P	80 - 120
Dieldrin	96.6		P	80 - 120
Endosulfan I	94.4		P	80 - 120
Endosulfan II	91.5		P	80 - 120
Endosulfan Sulfate	96.3		P	80 - 120
Endrin	92.3		P	80 - 120
Endrin Aldehyde	91.1		P	80 - 120
Endrin Ketone	95.2		P	80 - 120
Gamma-BHC	96.9		P	80 - 120
Gamma-Chlordane	96.0		P	80 - 120
Heptachlor	92.9		P	80 - 120
Heptachlor Epoxide	96.0		P	80 - 120
Methoxychlor	99.7		P	80 - 120
Mirex	97.3		P	80 - 120
Permethrin	90.1		P	80 - 120
Trifluralin	96.6		P	80 - 120

Reference Method: EPA 8270D
Run ID: A89557
Included Lab Sample IDs: 2061579

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	103		P	80 - 120

Reference Method: EPA 8321B
Run ID: A89578
Included Lab Sample IDs: 2061399, 2061581

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	91.4	101	P/P	60 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A89578
Included Lab Sample IDs: 2061399, 2061581

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glufosinate	99.3	104	P/P	60 - 160
Glyphosate	98.9	112	P/P	60 - 160

Reference Method: EPA 8276
Run ID: A89581
Included Lab Sample IDs: 2061578

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	91.4		P	80 - 120

Reference Method: EPA 8321B
Run ID: A89585
Included Lab Sample IDs: 2061399, 2061581

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	103	97.9	P/P	60 - 160
Endothall	86.5	94.4	P/P	60 - 160

Reference Method: SM 5310 B-00
Run ID: A89603
Included Lab Sample IDs: 2061373, 2061376, 2061380, 2061381, 2061385

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	93.7	94.8	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A89617
Included Lab Sample IDs: 2061384

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A89639
Included Lab Sample IDs: 2061376

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.7	98.7	P/P	90 - 110

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

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			Precision		
							LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							4.74	
EPA 200.7 Rev. 4.4	Barium	102		101	104	102			1.14
	Calcium	105		103	102				2.04
	Iron	109		107	108	105			2.25
	Magnesium	113		102	111	108			2.35
	Manganese	101		99.5	103	102			1.17
	Potassium	110		108	106	102			2.85
	Sodium	107		108	107				3.02
	Zinc	101		101	106	104			1.53
EPA 200.8 Rev. 5.4	Aluminum	101		99.4	102	100			1.49
	Antimony	100		102	103	101			1.74
	Arsenic	105		103	103	102			0.756
	Boron	99.9		104	110	109			1.27
	Cadmium	110		109	112	110			2.28
	Chromium	101		99.8	103	100			2.89
	Copper	101		98.0	99.4	97.8			1.60
	Lead	93.5		98.3	98.4	97.7			0.739
	Nickel	102		98.5	101	98.7			2.19
	Selenium	103		101	99.5	98.1			1.37
	Silver	103		104	104	103			1.10
	Thallium	103		111	110	111			0.462
EPA 300.0	Bromide	100		96.0	96.0			0.790	
EPA 300.0 Rev. 2.1	Chloride	100		97.4	96.3			0.0772	
	Sulfate	101		96.7	98.2			0.0441	
EPA 350.1 Rev. 2.0	Ammonia-N	100		101	102				0.658
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101		100	102				1.18
	Kjeldahl Nitrogen	104		99.6	107				4.54
	Kjeldahl Nitrogen	100							0.455
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5		101	99.6				0.858
	NO2NO3-N	100		97.0					0.243
EPA 365.1 Rev. 2.0	Total-P	99.5		104	101				2.39
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.5		95.1	96.1				0.845
EPA 8270D	Acetochlor	99.4	89.0	81.3	84.8		11.0		4.18
	Alachlor	102	87.4	84.6	88.1		15.7		4.02
	Aldrin	58.0	52.8	68.8	64.4		9.34		6.58
	Alpha-BHC	87.6	106	117	101		19.2		15.0
	Alpha-Chlordane	84.4	86.6	82.7	78.2		2.57		5.61
	Ametryn	90.9	87.9	130	92.7		3.36		33.5
	Atrazine	104	99.6				4.00		1.35
	Atrazine Desethyl	106	56.6	97.4	96.9		60.9		0.408
	Azinphos Methyl	126	111	105	111		13.2		4.84
	Beta-BHC	109	124	89.9	83.8		13.2		7.02
	Bromacil	68.2	63.5	79.2	76.9		7.00		2.99
	Butylate	60.1	59.7	66.6	55.2		0.553		18.6
	Carbophenothion	70.1	77.2	94.7	93.5		9.70		1.23
	Chlorothalonil	118	134	71.0	172		12.4		82.9
	Chlorpyrifos Ethyl	98.0	111	86.7	91.2		12.3		5.06
	Chlorpyrifos Methyl	98.5	88.2	94.4	90.7		11.1		3.98
	Cyanazine	134	103	147	135		26.2		8.64
	Cypermethrin	72.6	75.7	81.0	83.0		4.21		2.46
	DDD-p,p'	93.7	97.5	85.1	81.1		3.96		4.87
	DDE-p,p'	86.7	88.6	80.4	76.7		2.17		4.62
	DDT-p,p'	96.2	94.2	117	96.6		2.06		19.4
	Delta-BHC	125	132	143	118		6.01		18.9

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270D	Demeton	73.8	69.1	106	84.4	6.67		22.3
	Diazinon	99.2	84.8	101	102	15.7		0.732
	Dicofol	87.8	99.9	78.0	77.2	12.9		1.03
	Dieldrin	89.4	91.8	84.5	80.6	2.65		4.71
	Dimethenamid	100	88.7	82.8	85.9	12.2		3.67
	Disulfoton	85.4	82.8	104	102	3.09		1.16
	Dithiopyr	99.5	87.6	89.3	93.7	12.8		4.76
	Endosulfan I	90.3	92.1	85.3	87.3	1.92		2.36
	Endosulfan II	85.0	95.0	103	96.1	11.1		6.88
	Endosulfan Sulfate	69.6	81.6	75.3	74.5	15.9		1.14
	Endrin	94.4	86.0	85.1	84.5	9.21		0.778
	Endrin Aldehyde	85.5	96.7	58.7	86.3	12.4		38.1
	Endrin Ketone	71.6	81.1	78.1	74.9	12.5		4.16
	EPTC	61.1	59.5	65.5	50.9	2.65		25.1
	Ethion	90.8	96.9	92.0	89.3	6.53		2.96
	Ethoprop	84.2	77.3	102	96.4	8.59		5.52
	Fenamiphos	85.0	86.2	92.1	77.1	1.40		17.7
	Fipronil	95.0	80.1	81.8	71.8	17.0		12.9
	Fipronil Desulfinyl	91.2	78.9	67.1	60.0	14.4		10.1
	Fipronil Sulfide	89.0	91.1	66.2	54.9	2.43		14.3
	Fipronil Sulfone	78.1	75.7	50.5	35.4	3.22		19.3
	Fonofos	86.8	88.0	105	96.9	1.32		7.75
	Gamma-BHC	115	118	123	109	2.07		12.0
	Gamma-Chlordane	82.2	84.7	82.9	77.9	2.95		6.31
	Heptachlor	67.4	67.0	74.3	69.8	0.494		6.25
	Heptachlor Epoxide	85.1	88.7	88.9	84.9	4.08		4.62
	Hexazinone	105	100	113	110	4.89		3.06
	Malathion	93.4	105	80.1	80.4	12.0		0.437
	Metalaxyl	97.4	77.9	89.8	86.6	22.2		3.68
	Methoxychlor	104	113	91.5	101	7.88		9.46
	Metolachlor	90.4	95.2	81.4	84.9	5.15		4.18
	Metribuzin	202	87.2	216	217	79.3		0.452
	Mevinphos	81.2	73.5	104	96.5	9.91		7.29
	Mirex	64.0	63.2	67.7	65.4	1.14		3.46
	Molinate	65.2	62.5	62.9	59.7	4.23		5.27
	Norflurazon	93.7	76.8	79.3	67.8	19.8		15.6
	Oxadiazon	93.1	97.4	82.8	85.5	4.56		2.71
	Parathion Ethyl	92.7	90.3	92.0	87.1	2.68		5.45
	Parathion Methyl	104	80.0	106	104	26.6		1.81
	Pendimethalin	85.6	81.0	100	94.1	5.49		6.30
	Permethrin	66.0	67.8	81.9	81.5	2.72		0.557
	Phorate	75.8	69.5	94.5	77.8	8.66		19.4
	Prodiamine	62.5	78.4	67.3	67.0	22.5		0.444
	Prometon	81.3	80.1	76.0	76.1	1.53		0.0937
	Prometryn	86.3	80.5	82.2	78.2	6.93		4.94
	Simazine	110	97.1	126	133	12.3		4.93
	Tebuconazole	78.2	72.7	69.4	65.5	7.35		5.78
	Terbufos	85.1	82.3	107	96.0	3.35		11.1
	Terbuthylazine	90.8	95.9	85.2	82.4	5.45		3.31
	Trifluralin	85.4	91.8	93.1	87.7	7.25		6.06
EPA 8276	Chlordane	77.7	81.0	62.7	54.7	4.23		13.6
	Toxaphene	57.9	66.6	50.5	39.4	13.8		24.8
EPA 8321B	2,4-D	60.5		65.3	70.1			4.88
	Acesulfame K	112		71.3	72.6			1.72

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8321B	Acetaminophen	82.2	116	118			2.21
	AMPA	103	94.0	92.8			1.37
	Bentazon	64.9	36.3	36.7			0.308
	Carbamazepine	85.2	74.9	71.9			3.99
	Diuron	83.0	66.4	62.4			5.81
	Endothall	100	25.1	20.9			18.5
	Fenuron	101	80.6	83.3			3.35
	Fluridone	101	87.0	80.8			3.32
	Glufosinate	94.1	80.5	85.4			5.80
	Glyphosate	107	89.8	89.1			0.769
	Hydrocodone	96.7	79.7	78.8			1.14
	Ibuprofen	75.9	87.0	87.9			1.12
	Imazapyr	74.4					24.4
	Imidacloprid	111	167	184			7.98
	Linuron	82.4	70.5	66.6			5.72
	MCPP	79.2	79.5	88.5			10.6
	Naproxen	70.7	50.3	51.7			2.75
	Primidone	94.4	102	109			6.24
	Pyraclostrobin	78.1	76.3	78.7			3.10
	Sucralose	99.4	101	109			5.41
	Triclopyr	50.5	40.6	47.4			15.6
SM 2120 B	Color (true)	99.7				1.26	
SM 2320 B-97	Total Alkalinity	102				0.0959	
SM 2540 C-97	TDS					4.53	
SM 4500 F-C-97	Fluoride	94.0	97.0	97.0			0.0
SM 5310 B-00	Organic Carbon	95.8	96.3	94.6			1.32

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2061372, 2061375, 2061378, 2061379, 2061384
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2061400, 2061401, 2061402, 2061403, 2061404
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2061400, 2061401, 2061402, 2061403, 2061404
EPA 300.0 / E31780	Bromide in aqueous matrices	2061372, 2061375, 2061378, 2061379
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2061384
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2061384
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2061373, 2061376, 2061380, 2061381, 2061385
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2061373, 2061376, 2061380, 2061381, 2061385
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2061373, 2061376, 2061380, 2061381, 2061385
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2061373, 2061376, 2061380, 2061381, 2061385
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2061374, 2061377, 2061382, 2061383, 2061386
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	2061578
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2061579
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2061578

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2061399, 2061581
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2061399, 2061581
SM 2120 B / E31780	True Color measured at 450 nm	2061375, 2061384
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2061372, 2061375, 2061378, 2061379, 2061384
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2061384
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2061372, 2061375, 2061378, 2061379, 2061384
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2061372, 2061375, 2061378, 2061379, 2061384
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2061373, 2061376, 2061380, 2061381, 2061385

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	02/09/2019			02/11/2019 12:16	Adrian Shelby	2061372, 2061375, 2061378, 2061379, 2061384
EPA 200.7 Rev. 4.4	02/09/2019	02/11/2019 16:45	Elliott D. Healy	02/12/2019 17:53	Martin Acosta	2061400
	02/09/2019	02/11/2019 16:45	Elliott D. Healy	02/12/2019 17:58	Martin Acosta	2061401
	02/09/2019	02/11/2019 16:45	Elliott D. Healy	02/12/2019 18:03	Martin Acosta	2061402
	02/09/2019	02/11/2019 16:45	Elliott D. Healy	02/12/2019 18:07	Martin Acosta	2061403
	02/09/2019	02/11/2019 16:45	Elliott D. Healy	02/12/2019 18:30	Martin Acosta	2061404
EPA 200.8 Rev. 5.4	02/09/2019	02/11/2019 16:45	Elliott D. Healy	02/13/2019 22:29	Robert K Palmer	2061400
	02/09/2019	02/11/2019 16:45	Elliott D. Healy	02/13/2019 22:39	Robert K Palmer	2061401
	02/09/2019	02/11/2019 16:45	Elliott D. Healy	02/13/2019 22:48	Robert K Palmer	2061402
	02/09/2019	02/11/2019 16:45	Elliott D. Healy	02/13/2019 23:17	Robert K Palmer	2061403
	02/09/2019	02/11/2019 16:45	Elliott D. Healy	02/13/2019 23:26	Robert K Palmer	2061404
	02/09/2019	02/11/2019 16:45	Elliott D. Healy	02/15/2019 18:35	Robert K Palmer	2061400
	02/09/2019	02/11/2019 16:45	Elliott D. Healy	02/15/2019 18:41	Robert K Palmer	2061401
	02/09/2019	02/11/2019 16:45	Elliott D. Healy	02/15/2019 18:47	Robert K Palmer	2061402
	02/09/2019	02/11/2019 16:45	Elliott D. Healy	02/15/2019 19:06	Robert K Palmer	2061403
	02/09/2019	02/11/2019 16:45	Elliott D. Healy	02/15/2019 19:12	Robert K Palmer	2061404
EPA 300.0	02/09/2019			02/14/2019 14:46	Lipi Saha	2061372
	02/09/2019			02/14/2019 19:20	Lipi Saha	2061375
	02/09/2019			02/14/2019 19:37	Lipi Saha	2061378
	02/09/2019			02/14/2019 19:54	Lipi Saha	2061379
EPA 300.0 Rev. 2.1	02/09/2019			02/22/2019 18:00	Lipi Saha	2061384
EPA 350.1 Rev. 2.0	02/09/2019			02/15/2019 11:51	Ping Hua	2061373
	02/09/2019			02/15/2019 12:00	Ping Hua	2061376
	02/09/2019			02/15/2019 12:01	Ping Hua	2061380
	02/09/2019			02/15/2019 12:03	Ping Hua	2061381
	02/09/2019			02/15/2019 12:04	Ping Hua	2061385
EPA 351.2 Rev. 2.0	02/09/2019	02/13/2019 12:15	Adrian Shelby	02/14/2019 14:53	Joseph Suarez	2061373
	02/09/2019	02/15/2019 12:45	Adrian Shelby	02/18/2019 12:03	Joseph Suarez	2061380
	02/09/2019	02/15/2019 12:45	Adrian Shelby	02/18/2019 12:05	Joseph Suarez	2061381
	02/09/2019	02/15/2019 12:45	Adrian Shelby	02/18/2019 12:09	Joseph Suarez	2061385
	02/09/2019	02/21/2019 16:30	Adrian Shelby	02/22/2019 15:44	Joseph Suarez	2061376
EPA 353.2 Rev. 2.0	02/09/2019			02/14/2019 11:48	Beverly Y. Sanders	2061373
	02/09/2019			02/14/2019 11:49	Beverly Y. Sanders	2061376
	02/09/2019			02/14/2019 11:50	Beverly Y. Sanders	2061380
	02/09/2019			02/14/2019 11:57	Beverly Y. Sanders	2061381
	02/09/2019			02/14/2019 12:03	Beverly Y. Sanders	2061385
EPA 365.1 Rev. 2.0	02/09/2019	02/13/2019 12:40	Sima Feizi	02/13/2019 18:47	Rosalyn Ballman	2061373
	02/09/2019	02/13/2019 12:40	Sima Feizi	02/13/2019 18:48	Rosalyn Ballman	2061376
	02/09/2019	02/13/2019 12:40	Sima Feizi	02/13/2019 18:49	Rosalyn Ballman	2061380

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 365.1 Rev. 2.0	02/09/2019	02/13/2019 12:40	Sima Feizi	02/13/2019 18:50	Rosalyn Ballman	2061381
	02/09/2019	02/13/2019 12:40	Sima Feizi	02/13/2019 18:51	Rosalyn Ballman	2061385
EPA 365.1 Rev. 2.0 dissolved	02/09/2019			02/12/2019 16:07	Jhamieka S. Greenwood	2061374
	02/09/2019			02/12/2019 16:08	Jhamieka S. Greenwood	2061377
	02/09/2019			02/12/2019 16:09	Jhamieka S. Greenwood	2061382
	02/09/2019			02/12/2019 16:14	Jhamieka S. Greenwood	2061383, 2061386
EPA 8270D	02/11/2019	02/13/2019 11:45	Fe-Val Siddell	02/14/2019 18:18	Vandana T. Nagar	2061579
	02/11/2019	02/13/2019 11:45	Fe-Val Siddell	02/20/2019 19:47	Vandana T. Nagar	2061579
	02/11/2019	02/14/2019 08:00	Fe-Val Siddell	02/19/2019 23:36	Dinesh Mishra	2061578
EPA 8276	02/11/2019	02/14/2019 08:00	Fe-Val Siddell	02/19/2019 03:08	Arthur Maknenko	2061578
	02/11/2019	02/14/2019 08:00	Fe-Val Siddell	02/21/2019 04:15	Arthur Maknenko	2061578
EPA 8321B	02/09/2019	02/12/2019 12:00	Hoor Shaik	02/20/2019 05:31	Juyoung Kim	2061399
	02/09/2019	02/13/2019 14:30	Rebecca Ware	02/13/2019 19:03	Mohammad Ghaffari	2061399
	02/09/2019	02/13/2019 14:30	Rebecca Ware	02/14/2019 12:15	Mohammad Ghaffari	2061399
	02/09/2019	02/13/2019 14:30	Rebecca Ware	02/16/2019 06:14	Mohammad Ghaffari	2061399
	02/11/2019	02/12/2019 12:00	Hoor Shaik	02/20/2019 06:05	Juyoung Kim	2061581
	02/11/2019	02/13/2019 14:30	Rebecca Ware	02/13/2019 19:16	Mohammad Ghaffari	2061581
	02/11/2019	02/13/2019 14:30	Rebecca Ware	02/14/2019 12:26	Mohammad Ghaffari	2061581
	02/11/2019	02/13/2019 14:30	Rebecca Ware	02/16/2019 13:29	Mohammad Ghaffari	2061581
SM 2120 B	02/09/2019			02/12/2019 16:03	Chelsea Hernandez	2061375, 2061384
SM 2320 B-97	02/09/2019			02/16/2019 11:26	Dale L. Simmons	2061372
	02/09/2019			02/16/2019 11:38	Dale L. Simmons	2061375
	02/09/2019			02/16/2019 11:51	Dale L. Simmons	2061378
	02/09/2019			02/16/2019 12:03	Dale L. Simmons	2061379
	02/09/2019			02/16/2019 12:16	Dale L. Simmons	2061384
SM 2540 C-97	02/09/2019			02/13/2019 15:22	Yijie Li	2061384
SM 2540 D-97	02/09/2019			02/13/2019 15:22	Yijie Li	2061372, 2061375, 2061378, 2061379, 2061384
SM 4500 F-C-97	02/09/2019			02/16/2019 11:26	Dale L. Simmons	2061372
	02/09/2019			02/16/2019 11:38	Dale L. Simmons	2061375
	02/09/2019			02/16/2019 11:51	Dale L. Simmons	2061378
	02/09/2019			02/16/2019 12:03	Dale L. Simmons	2061379
	02/09/2019			02/16/2019 12:16	Dale L. Simmons	2061384
SM 5310 B-00	02/09/2019			02/24/2019 09:15	Julia Storbeck	2061373
	02/09/2019			02/24/2019 09:29	Julia Storbeck	2061376
	02/09/2019			02/24/2019 09:44	Julia Storbeck	2061380
	02/09/2019			02/24/2019 10:00	Julia Storbeck	2061381
	02/09/2019			02/24/2019 10:13	Julia Storbeck	2061385