

Chemical Analysis Report

WAS-SECT-2018-08-29-01

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

Event Description: **Big Branch, Stafford, Coon, Srone Mill**

Request ID: **RQ-2018-07-23-15**

Customer: **WAS-SECT**

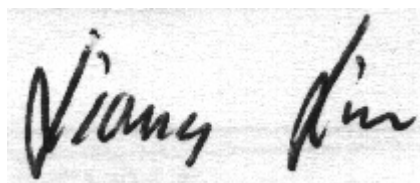
Project ID: **SMP**

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 20-SEP-2018 15:51

A handwritten signature in black ink, appearing to read "Liang Lin", is shown on a light-colored background.

Case Narrative

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

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

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

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

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited 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: Stone Mill Creek Upstream of Dianna St

Collection Date/Time: 08/29/2018 10:35

Field ID: G2WA0012

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2020928	EPA 180.1 Rev. 2.0	Turbidity	12		NTU	P351091	
	EPA 300.0 Rev. 2.1	Chloride	4.1		mg Cl/L	P351227	
		Sulfate	1.6		mg SO4/L	P351229	
	SM 2120 B	Color (true)	260		PCU	P350971	
	SM 2320 B-97	Total Alkalinity	2.0	I	mg CaCO3/L	P351367	
	SM 2540 C-97	TDS	40		mg/L	P351241	
	SM 2540 D-97	TSS	8	I	mg/L	P351072	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P351372	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.14		mg N/L	P351086	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.85		mg N/L	P350984	
2020930	EPA 353.2 Rev. 2.0	NO2NO3-N	0.081		mg N/L	P351129	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P351011	
	SM 5310 B-00	Organic Carbon	20		mg C/L	P351337	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P350974	
	dissolved						
2020943	EPA 8321B	Aldicarb	0.020	U	ug/L	P350923	
		Aldicarb Sulfone	0.0020	U	ug/L	P350923	
		Aldicarb Sulfoxide	0.0020	UJ	ug/L	P350923	MS
		Carbaryl	0.0020	U	ug/L	P350923	
		Carbofuran	0.0020	U	ug/L	P350923	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P350923	
		Methiocarb	0.0020	U	ug/L	P350923	
		Methomyl	0.0020	U	ug/L	P350923	
		Oxamyl	0.0020	U	ug/L	P350923	
		Propoxur	0.0020	UJ	ug/L	P350923	MS
2020945		2,4-D	0.0020	U	ug/L	P350923	
		Bentazon	8.0E-04	UJ	ug/L	P350923	MS
		MCP	0.0020	U	ug/L	P350923	
		Triclopyr**	0.0040	U	ug/L	P350923	
		Imidacloprid	0.0020	U	ug/L	P350923	
		Diuron	0.0020	U	ug/L	P350923	
		Pyraclostrobin**	0.0020	U	ug/L	P350923	
		Primidone**	0.0040	U	ug/L	P350923	
		Linuron	0.0040	U	ug/L	P350923	
		Acetaminophen**	0.0080	U	ug/L	P350923	
		Fenuron	0.016	U	ug/L	P350923	
		Imazapyr**	0.0072	I	ug/L	P350923	
		Carbamazepine**	8.0E-04	U	ug/L	P350923	
		Fluridone**	4.0E-04	U	ug/L	P350923	
		Hydrocodone**	8.0E-04	U	ug/L	P350923	
		Naproxen**	0.0080	U	ug/L	P350923	
		Ibuprofen**	0.020	U	ug/L	P350923	
		Sucralose**	0.081		ug/L	P350895	
		Glyphosate**	0.10	U	ug/L	P350895	

Field ID: G2WA0012

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2020945	EPA 8321B	AMPA**	0.10	U	ug/L	P350895	
		Endothall**	0.10	U	ug/L	P350895	
		Glufosinate**	0.10	U	ug/L	P350895	
		Acesulfame K**	0.10	U	ug/L	P350895	
2020947	EPA 8270D	Aldrin	4.2	U	ng/L	P350888	
		Alpha-BHC	2.1	U	ng/L	P350888	
		Beta-BHC	4.2	U	ng/L	P350888	RPD
		Delta-BHC	4.2	U	ng/L	P350888	
		Gamma-BHC	4.2	U	ng/L	P350888	RPD
		Carbophenothion	4.2	U	ng/L	P350888	
		Chlorothalonil	2.1	UJ	ng/L	P350888	LCS, RPD
		Cypermethrin	21	U	ng/L	P350888	
		DDD-p,p'	3.1	U	ng/L	P350888	
		DDE-p,p'	3.1	U	ng/L	P350888	
		DDT-p,p'	3.1	U	ng/L	P350888	
		Dieldrin	4.2	U	ng/L	P350888	
		Endosulfan I	4.2	U	ng/L	P350888	
		Endosulfan II	4.2	U	ng/L	P350888	
		Endosulfan Sulfate	2.1	U	ng/L	P350888	
		Endrin	2.1	U	ng/L	P350888	
		Endrin Aldehyde	2.1	U	ng/L	P350888	
		Heptachlor	1.6	U	ng/L	P350888	
		Heptachlor Epoxide	2.1	U	ng/L	P350888	
		Methoxychlor	4.2	U	ng/L	P350888	
		Mirex	2.1	U	ng/L	P350888	
		Permethrin	10	U	ng/L	P350888	
		Trifluralin	1.0	U	ng/L	P350888	
		Alpha-Chlordane	1.0	U	ng/L	P350888	
		Gamma-Chlordane	1.0	U	ng/L	P350888	
		Endrin Ketone	2.1	U	ng/L	P350888	
		Dicofol	31	U	ng/L	P350888	
		Chlordane	2.6	U	ng/L	P350888	
		Toxaphene	31	U	ng/L	P350888	
2020949	EPA 8270D	Alachlor	0.24	U	ng/L	P350967	
		Ametryn	0.31	U	ng/L	P350967	
		Atrazine	0.24	UJ	ng/L	P350967	LCS
		Atrazine Desethyl	1.4	UJ	ng/L	P350967	MS
		Azinphos Methyl	2.2	U	ng/L	P350967	
		Bromacil	0.48	U	ng/L	P350967	
		Butylate	0.39	UJ	ng/L	P350967	LCS
		Chlorpyrifos Ethyl	0.24	U	ng/L	P350967	
		Chlorpyrifos Methyl	0.096	U	ng/L	P350967	
		Demeton	1.9	U	ng/L	P350967	
		Diazinon	0.12	UJ	ng/L	P350967	LCS, MS
		Disulfoton	0.48	UJ	ng/L	P350967	RPD

Field ID: G2WA0012

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2020949	EPA 8270D	EPTC	1.2	U	ng/L	P350967	
		Ethion	0.14	UJ	ng/L	P350967	MS, RPD
		Ethoprop	0.096	UJ	ng/L	P350967	MS
		Fenamiphos	0.24	U	ng/L	P350967	
		Fipronil	0.24	U	ng/L	P350967	
		Fipronil Sulfide	0.14	U	ng/L	P350967	
		Fipronil Sulfone	0.14	U	ng/L	P350967	
		Hexazinone	0.48	U	ng/L	P350967	
		Malathion	0.34	U	ng/L	P350967	
		Metribuzin	0.19	UJ	ng/L	P350967	LCS, MS
		Mevinphos	0.48	U	ng/L	P350967	
		Molinate	0.29	U	ng/L	P350967	
		Norflurazon	0.48	U	ng/L	P350967	
		Pendimethalin	0.96	U	ng/L	P350967	
		Phorate	0.24	U	ng/L	P350967	
		Prometon	0.87	U	ng/L	P350967	
		Prometryn	0.19	U	ng/L	P350967	
		Simazine	0.48	U	ng/L	P350967	
		Terbufos	0.096	U	ng/L	P350967	
		Terbutylazine	0.41	UJ	ng/L	P350967	MS
		Fonofos	0.19	UJ	ng/L	P350967	LCS
		Metalaxyl	0.24	U	ng/L	P350967	
		Metolachlor	0.49	I	ng/L	P350967	
		Acetochlor	0.24	U	ng/L	P350967	
		Cyanazine	0.48	UJ	ng/L	P350967	RPD
		Parathion Ethyl	0.24	U	ng/L	P350967	
		Parathion Methyl	0.24	U	ng/L	P350967	
2020951	EPA 200.7 Rev. 4.4	Calcium	2.67		mg/L	P350964	
		Iron	1.78E+03		ug/L	P350964	
		Magnesium	0.65		mg/L	P350964	
		Potassium	0.34	I	mg/L	P350964	
		Sodium	2.4		mg/L	P350964	
		Zinc	5.0	U	ug/L	P350964	
	EPA 200.8 Rev. 5.4	Arsenic	0.45		ug/L	P350964	
		Cadmium	0.020	U	ug/L	P350964	
		Chromium	0.82	I	ug/L	P350964	
		Copper	0.26	I	ug/L	P350964	
		Lead	0.84		ug/L	P350964	
		Nickel	0.49	I	ug/L	P350964	
		Silver	0.010	U	ug/L	P350964	

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: Refer to the narrative for an explanation of QC Codes.

EPA 8270D: MS accuracy for Dieldrin not assessed due to high content of this parameter in the sample spiked. Refer to the narrative for an explanation of QC Codes.

EPA 8270D: Refer to the narrative for an explanation of QC Codes.

EPA 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 09/13/2018.

Sample Location: Stafford Creek 100 meters upstream of SR 69 Collection Date/Time: 08/29/2018 13:32

Field ID: G2WA0004

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2020929	EPA 180.1 Rev. 2.0	Turbidity	4.8		NTU	P351091	
	EPA 300.0 Rev. 2.1	Chloride	7.7		mg Cl/L	P351227	
		Sulfate	0.60		mg SO4/L	P351229	
	SM 2120 B	Color (true)	110	A	PCU	P350971	
	SM 2320 B-97	Total Alkalinity	13		mg CaCO3/L	P351367	
	SM 2540 C-97	TDS	58		mg/L	P351241	
	SM 2540 D-97	TSS	2	I	mg/L	P351072	
	SM 4500 F-C-97	Fluoride	0.043	I	mg F/L	P351372	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.016		mg N/L	P351086	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.56		mg N/L	P350984	
2020931	EPA 353.2 Rev. 2.0	NO2NO3-N	0.29		mg N/L	P351130	
	EPA 365.1 Rev. 2.0	Total-P	0.024		mg P/L	P351012	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P351132	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.005	I	mg P/L	P350974	
2020944	EPA 8321B	Aldicarb	0.020	U	ug/L	P350923	
		Aldicarb Sulfone	0.0020	U	ug/L	P350923	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P350923	MS
		Carbaryl	0.0020	U	ug/L	P350923	
		Carbofuran	0.0020	U	ug/L	P350923	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P350923	
		Methiocarb	0.0020	U	ug/L	P350923	
		Methomyl	0.0020	U	ug/L	P350923	
		Oxamyl	0.0020	U	ug/L	P350923	
		Propoxur	0.0020	U	ug/L	P350923	MS
2020946		2,4-D	0.0020	U	ug/L	P350923	
		Bentazon	8.0E-04	U	ug/L	P350923	MS
		MCP	0.0020	U	ug/L	P350923	
		Triclopyr**	0.0040	U	ug/L	P350923	
		Imidacloprid	0.0073	I	ug/L	P350923	
		Diuron	0.0020	U	ug/L	P350923	
		Pyraclostrobin**	0.0020	U	ug/L	P350923	
		Primidone**	0.0040	U	ug/L	P350923	
		Linuron	0.0040	U	ug/L	P350923	
		Acetaminophen**	0.0080	U	ug/L	P350923	
		Fenuron	0.016	U	ug/L	P350923	
		Imazapyr**	0.023		ug/L	P350923	
		Carbamazepine**	8.0E-04	U	ug/L	P350923	
		Fluridone**	4.0E-04	U	ug/L	P350923	
		Hydrocodone**	8.0E-04	U	ug/L	P350923	
		Naproxen**	0.0080	U	ug/L	P350923	
		Ibuprofen**	0.020	U	ug/L	P350923	
		Sucralose**	0.027	I	ug/L	P350895	
		Glyphosate**	0.10	U	ug/L	P350895	

Field ID: G2WA0004

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2020946	EPA 8321B	AMPA**	0.10	U	ug/L	P350895	
		Endothall**	0.10	U	ug/L	P350895	
		Glufosinate**	0.10	U	ug/L	P350895	
		Acesulfame K**	0.10	U	ug/L	P350895	
2020948	EPA 8270D	Aldrin	4.2	U	ng/L	P350888	
		Alpha-BHC	2.1	U	ng/L	P350888	
		Beta-BHC	4.2	U	ng/L	P350888	RPD
		Delta-BHC	4.2	U	ng/L	P350888	
		Gamma-BHC	4.2	U	ng/L	P350888	RPD
		Carbophenothion	4.2	U	ng/L	P350888	
		Chlorothalonil	2.1	UJ	ng/L	P350888	LCS, RPD
		Cypermethrin	21	U	ng/L	P350888	
		DDD-p,p'	3.1	U	ng/L	P350888	
		DDE-p,p'	3.1	U	ng/L	P350888	
		DDT-p,p'	3.1	U	ng/L	P350888	
		Dieldrin	4.2	U	ng/L	P350888	
		Endosulfan I	4.2	U	ng/L	P350888	
		Endosulfan II	4.2	U	ng/L	P350888	
		Endosulfan Sulfate	2.1	U	ng/L	P350888	
		Endrin	2.1	U	ng/L	P350888	
		Endrin Aldehyde	2.1	U	ng/L	P350888	
		Heptachlor	1.6	U	ng/L	P350888	
		Heptachlor Epoxide	2.1	U	ng/L	P350888	
		Methoxychlor	4.2	U	ng/L	P350888	
		Mirex	2.1	U	ng/L	P350888	
		Permethrin	10	U	ng/L	P350888	
		Trifluralin	1.0	U	ng/L	P350888	
		Alpha-Chlordane	1.0	U	ng/L	P350888	
		Gamma-Chlordane	1.0	U	ng/L	P350888	
		Endrin Ketone	2.1	U	ng/L	P350888	
		Dicofol	31	U	ng/L	P350888	
		Chlordane	2.6	U	ng/L	P350888	
		Toxaphene	31	U	ng/L	P350888	
2020950	EPA 8270D	Alachlor	0.24	U	ng/L	P350967	
		Ametryn	0.31	U	ng/L	P350967	
		Atrazine	0.24	UJ	ng/L	P350967	LCS
		Atrazine Desethyl	1.4	U	ng/L	P350967	MS
		Azinphos Methyl	2.1	U	ng/L	P350967	
		Bromacil	0.47	U	ng/L	P350967	
		Butylate	0.38	UJ	ng/L	P350967	LCS
		Chlorpyrifos Ethyl	0.24	U	ng/L	P350967	
		Chlorpyrifos Methyl	0.095	U	ng/L	P350967	
		Demeton	1.9	U	ng/L	P350967	
		Diazinon	0.12	UJ	ng/L	P350967	LCS, MS
		Disulfoton	0.47	UJ	ng/L	P350967	RPD
	EPA 8276						

Field ID: G2WA0004

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2020950	EPA 8270D	EPTC	1.2	U	ng/L	P350967	
		Ethion	0.14	UJ	ng/L	P350967	MS, RPD
		Ethoprop	0.095	U	ng/L	P350967	MS
		Fenamiphos	0.24	U	ng/L	P350967	
		Fipronil	0.24	U	ng/L	P350967	
		Fipronil Sulfide	0.14	U	ng/L	P350967	
		Fipronil Sulfone	0.14	U	ng/L	P350967	
		Hexazinone	0.47	U	ng/L	P350967	
		Malathion	0.33	U	ng/L	P350967	
		Metribuzin	0.19	UJ	ng/L	P350967	LCS, MS
		Mevinphos	0.47	U	ng/L	P350967	
		Molinate	0.28	U	ng/L	P350967	
		Norflurazon	0.47	U	ng/L	P350967	
		Pendimethalin	0.95	U	ng/L	P350967	
		Phorate	0.24	U	ng/L	P350967	
		Prometon	0.85	U	ng/L	P350967	
		Prometryn	0.19	U	ng/L	P350967	
		Simazine	0.47	U	ng/L	P350967	
		Terbufos	0.095	U	ng/L	P350967	
		Terbutylazine	0.40	U	ng/L	P350967	MS
		Fonofos	0.19	UJ	ng/L	P350967	LCS
		Metalaxyl	0.24	U	ng/L	P350967	
		Metolachlor	17		ng/L	P350967	
		Acetochlor	0.24	U	ng/L	P350967	
		Cyanazine	0.47	U	ng/L	P350967	RPD
		Parathion Ethyl	0.24	U	ng/L	P350967	
		Parathion Methyl	0.24	U	ng/L	P350967	
2020952	EPA 200.7 Rev. 4.4	Calcium	5.90		mg/L	P350964	
		Iron	860		ug/L	P350964	
		Magnesium	2.47		mg/L	P350964	
		Potassium	1.1	I	mg/L	P350964	
		Sodium	2.6		mg/L	P350964	
		Zinc	5.0	U	ug/L	P350964	
	EPA 200.8 Rev. 5.4	Arsenic	0.76		ug/L	P350964	
		Cadmium	0.020	U	ug/L	P350964	
		Chromium	0.60	I	ug/L	P350964	
		Copper	0.23	I	ug/L	P350964	
		Lead	0.32		ug/L	P350964	
		Nickel	0.35	I	ug/L	P350964	
		Silver	0.010	U	ug/L	P350964	

Ref. Method and Comment:

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

EPA 8270D: MS accuracy for Dieldrin not assessed due to high content of this parameter in the sample spiked. Refer to the narrative for an explanation of QC Codes.

EPA 8270D: Refer to the narrative for an explanation of QC Codes.

Sample Location: Big Branch Downstream of Road 5

Collection Date/Time: 08/29/2018 12:40

Field ID: G2WA0010

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2020925	EPA 180.1 Rev. 2.0	Turbidity	14	A	NTU	P351091	
	EPA 300.0 Rev. 2.1	Chloride	4.1		mg Cl/L	P351227	
		Sulfate	1.8		mg SO4/L	P351229	
	SM 2120 B	Color (true)	290		PCU	P350971	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P351367	
	SM 2540 C-97	TDS	62		mg/L	P351241	
	SM 2540 D-97	TSS	10		mg/L	P351072	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P351372	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.19		mg N/L	P351086	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P350984	
2020926	EPA 353.2 Rev. 2.0	NO2NO3-N	0.090		mg N/L	P351129	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P351011	
	SM 5310 B-00	Organic Carbon	23		mg C/L	P351337	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P350974	
	dissolved						

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: P351091

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P350964

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P350964

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.20	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.20	U	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P351227

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P351229

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P351086

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P350984

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351129

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351130

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351011

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351012

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P350974

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

Reference Method: EPA 8270D
Batch ID: P350888

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	4.0	U	ng/L
Carbophenothion	4.0	U	ng/L
Chlorothalonil	2.0	U	ng/L
Cypermethrin	20	U	ng/L
DDD-p,p'	3.0	U	ng/L
DDE-p,p'	3.0	U	ng/L
DDT-p,p'	3.0	U	ng/L
Delta-BHC	4.0	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
Gamma-BHC	4.0	U	ng/L
Gamma-Chlordane	1.0	U	ng/L
Heptachlor	1.5	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270D**Batch ID: P350888**

Component	Result	Code	Units
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	1.0	U	ng/L

Reference Method: EPA 8270D**Batch ID: P350967**

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.32	U	ng/L
Atrazine	0.25	U	ng/L
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	0.50	U	ng/L
Demeton	2.0	U	ng/L
Diazinon	0.12	U	ng/L
Disulfoton	0.50	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.25	U	ng/L
Fipronil	0.25	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
Metaxyl	0.25	U	ng/L
Metolachlor	0.25	U	ng/L
Metribuzin	0.20	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8276

Batch ID: P350888

Component	Result	Code	Units
Chlordane	2.5	U	ng/L
Toxaphene	30	U	ng/L

Reference Method: EPA 8321B

Batch ID: P350895

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.10	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B

Batch ID: P350923

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
3-Hydroxycarbofuran	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Aldicarb	0.020	U	ug/L
Aldicarb Sulfone	0.0020	U	ug/L
Aldicarb Sulfoxide	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.017	I	ug/L
Fluridone	4.0E-04	U	ug/L
Hydrocodone	8.0E-04	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
Methiocarb	0.0020	U	ug/L
Methomyl	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Oxamyl	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Propoxur	0.0020	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B

Batch ID: P350971

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P351367

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 C-97
Batch ID: P351241

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P351072

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P351372

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P351132

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

Reference Method: SM 5310 B-00
Batch ID: P351337

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: P350964

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	102		P	85 - 115
Iron	102		P	85 - 115
Magnesium	109		P	85 - 115
Potassium	110		P	85 - 115
Sodium	101		P	85 - 115
Zinc	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P350964

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	93.8		P	85 - 115
Cadmium	93.0		P	85 - 115
Chromium	88.5		P	85 - 115
Copper	87.3		P	85 - 115
Lead	91.5		P	85 - 115
Nickel	89.8		P	85 - 115
Silver	92.7		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P351227

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P351229

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P351086

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P350984

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P351129

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P351130

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P351011

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P351012

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P350974

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.9		P	90 - 110

Reference Method: EPA 8270D

Batch ID: P350888

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	71.6	62.0	P/P	24 - 89.0
Alpha-BHC	97.8	80.4	P/P	58 - 117
Alpha-Chlordane	90.8	81.5	P/P	56 - 115
Beta-BHC	101	109	P/P	55 - 137
Carbophenothion	86.7	70.6	P/P	37 - 145
Chlorothalonil	39.2	25.2	P/F	26 - 163
Cypermethrin	94.4	76.5	P/P	42 - 156
DDD-p,p'	98.8	89.5	P/P	59 - 129
DDE-p,p'	93.2	82.4	P/P	52 - 117
DDT-p,p'	106	88.3	P/P	48 - 128
Delta-BHC	104	94.2	P/P	59 - 158
Dicofol	91.3	77.7	P/P	19 - 124
Dieldrin	95.0	85.0	P/P	57 - 126
Endosulfan I	90.1	82.4	P/P	59 - 133
Endosulfan II	98.9	78.1	P/P	58 - 148
Endosulfan Sulfate	92.0	74.9	P/P	56 - 135
Endrin	96.7	89.4	P/P	50 - 140
Endrin Aldehyde	89.4	76.8	P/P	47 - 141
Endrin Ketone	96.1	79.5	P/P	63 - 123
Gamma-BHC	107	110	P/P	59 - 132
Gamma-Chlordane	88.7	79.9	P/P	55 - 112
Heptachlor	76.2	65.5	P/P	45 - 102
Heptachlor Epoxide	90.4	82.2	P/P	61 - 116
Methoxychlor	107	92.3	P/P	60 - 133
Mirex	91.4	75.5	P/P	40 - 98.0
Permethrin	91.7	78.4	P/P	45 - 131
Trifluralin	92.9	77.9	P/P	38 - 179

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270D

Batch ID: P350967

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	110	106	P/P	74 - 119
Alachlor	111	107	P/P	75 - 118
Ametryn	105	108	P/P	59 - 137
Atrazine	120	115	F/P	73 - 120
Atrazine Desethyl	116	115	P/P	19 - 129
Azinphos Methyl	117	124	P/P	65 - 181
Bromacil	93.9	91.2	P/P	43 - 123
Butylate	86.6	66.7	F/P	28 - 85.0
Chlorpyrifos Ethyl	99.2	95.9	P/P	55 - 112
Chlorpyrifos Methyl	106	102	P/P	35 - 124
Cyanazine	211	229	P/P	26 - 262
Demeton	77.8	92.2	P/P	43 - 122
Diazinon	125	118	F/P	72 - 120
Disulfoton	75.6	104	P/P	45 - 137
EPTC	77.4	62.8	P/P	28 - 95.0
Ethion	75.8	106	P/P	63 - 127
Ethoprop	98.9	98.5	P/P	63 - 109
Fenamiphos	90.1	98.2	P/P	66 - 136
Fipronil	103	108	P/P	63 - 126
Fipronil Sulfide	94.0	96.6	P/P	59 - 123
Fipronil Sulfone	90.0	87.9	P/P	56 - 122
Fonofos	119	109	F/P	64 - 114
Hexazinone	99.8	95.7	P/P	49 - 144
Malathion	105	103	P/P	68 - 131
Metaxyl	114	108	P/P	57 - 126
Metolachlor	109	107	P/P	75 - 118
Metribuzin	232	207	F/F	46 - 169
Mevinphos	113	104	P/P	34 - 126
Molinate	62.0	69.2	P/P	37 - 101
Norflurazon	103	103	P/P	63 - 127
Parathion Ethyl	103	102	P/P	78 - 109
Parathion Methyl	119	111	P/P	74 - 123
Pendimethalin	113	109	P/P	51 - 130
Phorate	107	97.9	P/P	53 - 116
Prometon	98.0	97.3	P/P	66 - 124
Prometryn	109	107	P/P	66 - 124
Simazine	119	112	P/P	62 - 134
Terbufos	114	109	P/P	59 - 115
Terbutylazine	111	110	P/P	76 - 113

Reference Method: EPA 8276

Batch ID: P350888

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	86.9	103	P/P	47 - 125
Toxaphene	67.0	71.3	P/P	46 - 147

Reference Method: EPA 8321B

Batch ID: P350895

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P350895

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
AMPA	86.1		P	40 - 150
Endothall	86.8		P	40 - 150
Glufosinate	84.0		P	40 - 150
Glyphosate	70.9		P	40 - 140
Sucralose	92.8		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P350923

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	67.7		P	40 - 150
3-Hydroxycarbofuran	96.0		P	40 - 150
Acetaminophen	113		P	30 - 150
Aldicarb	91.4		P	30 - 150
Aldicarb Sulfone	108		P	40 - 150
Aldicarb Sulfoxide	110		P	40 - 150
Bentazon	59.1		P	30 - 150
Carbamazepine	70.4		P	40 - 150
Carbaryl	67.0		P	40 - 150
Carbofuran	60.6		P	40 - 150
Diuron	65.8		P	40 - 150
Fenuron	93.5		P	40 - 150
Fluridone	86.7		P	40 - 150
Hydrocodone	110		P	40 - 150
Ibuprofen	72.9		P	40 - 150
Imazapyr	91.0		P	40 - 150
Imidacloprid	105		P	40 - 160
Linuron	60.5		P	40 - 150
MCPP	73.5		P	40 - 150
Methiocarb	53.5		P	40 - 150
Methomyl	99.7		P	40 - 150
Naproxen	94.1		P	40 - 150
Oxamyl	114		P	40 - 150
Primidone	105		P	40 - 150
Propoxur	58.3		P	40 - 150
Pyraclostrobin	72.9		P	40 - 150
Triclopyr	49.2		P	40 - 150

Reference Method: SM 2120 B

Batch ID: P350971

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

Reference Method: SM 2320 B-97

Batch ID: P351367

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P351372

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P351132

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.5		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P351337

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.4		P	85 - 115

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P350964

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2020573	Calcium	104		P	80 - 120
2020573	Iron	99.3		P	80 - 120
2020573	Magnesium	105		P	80 - 120
2020573	Potassium	106		P	80 - 120
2020573	Sodium	101		P	80 - 120
2020573	Zinc	103		P	80 - 120
2020654	Calcium	99.7		P	80 - 120
2020654	Iron	99.5	98.4	P/P	80 - 120
2020654	Magnesium	105	103	P/P	80 - 120
2020654	Potassium	110	107	P/P	80 - 120
2020654	Sodium	97.7		P	80 - 120
2020654	Zinc	104	101	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P350964

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2020573	Arsenic	99.8		P	80 - 120
2020573	Cadmium	98.4		P	80 - 120
2020573	Chromium	94.9		P	80 - 120
2020573	Copper	95.4		P	80 - 120
2020573	Lead	97.4		P	80 - 120
2020573	Nickel	95.4		P	80 - 120
2020573	Silver	95.4		P	80 - 120
2020654	Arsenic	101	102	P/P	80 - 120
2020654	Cadmium	101	103	P/P	80 - 120
2020654	Chromium	97.9	96.9	P/P	80 - 120
2020654	Copper	96.1	96.8	P/P	80 - 120
2020654	Lead	100	101	P/P	80 - 120
2020654	Nickel	97.1	97.5	P/P	80 - 120
2020654	Silver	95.9	96.7	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P351227

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2020917	Chloride	101		P	90 - 110
2021046	Chloride	96.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P351229

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2020917	Sulfate	98.1		P	90 - 110
2021046	Sulfate	91.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P351086

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2020693	Ammonia-N	99.8	97.6	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P350984

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2020918	Kjeldahl Nitrogen	105	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351129

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2020749	NO2NO3-N	99.0	99.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351130

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2020931	NO2NO3-N	101		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351011

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2020832	Total-P	97.8	97.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351012

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2020974	Total-P	96.6	98.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P350974

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2020963	O-Phosphate-P	96.8	97.3	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P350888

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2020849	Aldrin	72.1	70.7	P/P	26 - 96.0
2020849	Alpha-BHC	98.4	102	P/P	51 - 123
2020849	Alpha-Chlordane	92.6	96.1	P/P	45 - 120
2020849	Beta-BHC	97.6	132	P/P	43 - 146
2020849	Carbophenothion	93.5	95.6	P/P	26 - 179
2020849	Chlorothalonil	49.6	44.3	P/P	10 - 215
2020849	Cypermethrin	88.8	90.9	P/P	35 - 169
2020849	DDD-p,p'	97.1	104	P/P	49 - 131
2020849	DDE-p,p'	86.7	89.8	P/P	39 - 127
2020849	DDT-p,p'	109	112	P/P	49 - 120
2020849	Delta-BHC	113	144	P/P	49 - 187
2020849	Dicofol	90.3	99.9	P/P	10 - 129
2020849	Endosulfan I	92.5	92.6	P/P	57 - 130
2020849	Endosulfan II	91.1	107	P/P	52 - 148
2020849	Endosulfan Sulfate	95.6	95.7	P/P	55 - 129
2020849	Endrin	100	98.1	P/P	45 - 133

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270D

Batch ID: P350888

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2020849	Endrin Aldehyde	83.5	86.3	P/P	26 - 140
2020849	Endrin Ketone	96.8	103	P/P	60 - 125
2020849	Gamma-BHC	97.6	132	P/P	50 - 145
2020849	Gamma-Chlordane	90.3	95.4	P/P	44 - 118
2020849	Heptachlor	76.0	73.8	P/P	35 - 106
2020849	Heptachlor Epoxide	92.2	95.4	P/P	52 - 123
2020849	Methoxychlor	99.9	102	P/P	54 - 132
2020849	Mirex	88.1	95.4	P/P	36 - 107
2020849	Permethrin	93.5	95.3	P/P	47 - 135
2020849	Trifluralin	89.8	98.4	P/P	32 - 228

Reference Method: EPA 8270D

Batch ID: P350967

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2020949	Acetochlor	104	101	P/P	67 - 125
2020949	Alachlor	110	107	P/P	69 - 123
2020949	Ametryn	118	104	P/P	52 - 151
2020949	Atrazine	118	118	P/P	71 - 125
2020949	Atrazine Desethyl	163	148	F/F	10 - 129
2020949	Azinphos Methyl	113	97.7	P/P	48 - 200
2020949	Bromacil	112	108	P/P	46 - 130
2020949	Butylate	78.8	63.9	P/P	10 - 85.0
2020949	Chlorpyrifos Ethyl	87.7	87.6	P/P	54 - 115
2020949	Chlorpyrifos Methyl	92.9	93.9	P/P	44 - 117
2020949	Cyanazine	64.0	104	P/P	10 - 262
2020949	Demeton	94.6	100	P/P	24 - 145
2020949	Diazinon	134	124	F/P	66 - 129
2020949	Disulfoton	90.0	96.3	P/P	45 - 139
2020949	EPTC	71.0	57.9	P/P	10 - 86.0
2020949	Ethion	10.8	22.2	F/F	59 - 133
2020949	Ethoprop	121	120	F/F	54 - 116
2020949	Fenamiphos	96.8	87.0	P/P	55 - 140
2020949	Fipronil	100	95.6	P/P	37 - 142
2020949	Fipronil Sulfide	74.5	81.0	P/P	37 - 130
2020949	Fipronil Sulfone	73.2	76.1	P/P	18 - 143
2020949	Fonofos	114	114	P/P	55 - 118
2020949	Hexazinone	103	107	P/P	62 - 140
2020949	Malathion	94.6	95.1	P/P	64 - 132
2020949	Metalaxyl	111	108	P/P	55 - 129
2020949	Metolachlor	119	101	P/P	56 - 137
2020949	Metribuzin	225	218	F/P	16 - 218
2020949	Mevinphos	123	121	P/P	34 - 129
2020949	Molinate	56.2	53.5	P/P	16 - 99.0
2020949	Norflurazon	94.5	93.5	P/P	43 - 135
2020949	Parathion Ethyl	101	103	P/P	71 - 112
2020949	Parathion Methyl	115	117	P/P	65 - 127
2020949	Pendimethalin	118	116	P/P	35 - 159
2020949	Phorate	85.8	84.3	P/P	41 - 129
2020949	Prometon	99.0	91.3	P/P	56 - 140
2020949	Prometryn	109	102	P/P	65 - 130
2020949	Simazine	120	110	P/P	54 - 148

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270D**Batch ID: P350967**

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2020949	Terbufos	121	121	P/P	53 - 126
2020949	Terbutylazine	123	112	F/P	73 - 114

Reference Method: EPA 8276**Batch ID: P350888**

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2021035	Chlordane	114	115	P/P	41 - 134
2021035	Toxaphene	69.5	69.7	P/P	39 - 158

Reference Method: EPA 8321B**Batch ID: P350895**

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2020679	Acesulfame K	68.1	57.9	P/P	40 - 150
2020679	Endothall	103	107	P/P	40 - 150
2020679	Sucralose	91.4	93.1	P/P	40 - 150
2021075	AMPA	73.8	74.5	P/P	40 - 150
2021075	Glufosinate	86.7	76.2	P/P	40 - 150
2021075	Glyphosate	71.5	72.9	P/P	40 - 140

Reference Method: EPA 8321B**Batch ID: P350923**

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2020943	3-Hydroxycarbofuran	54.4	58.5	P/P	40 - 150
2020943	Aldicarb	30.4	31.6	P/P	30 - 150
2020943	Aldicarb Sulfone	62.4	72.6	P/P	40 - 150
2020943	Aldicarb Sulfoxide	31.3	36.2	F/F	40 - 150
2020943	Carbaryl	48.1	46.7	P/P	40 - 150
2020943	Carbofuran	51.4	59.8	P/P	40 - 150
2020943	Methiocarb	42.4	49.2	P/P	40 - 150
2020943	Methomyl	50.2	51.2	P/P	40 - 150
2020943	Oxamyl	68.0	74.2	P/P	40 - 150
2020943	Propoxur	36.3	34.0	F/F	40 - 150
2020945	2,4-D	99.8	107	P/P	40 - 150
2020945	Acetaminophen	127	126	P/P	30 - 150
2020945	Bentazon	20.8	18.4	F/F	30 - 150
2020945	Carbamazepine	56.4	48.5	P/P	40 - 150
2020945	Diuron	46.5	45.9	P/P	40 - 150
2020945	Fenuron	44.4	40.2	P/P	40 - 150
2020945	Fluridone	60.6	59.1	P/P	40 - 150
2020945	Hydrocodone	95.7	89.5	P/P	40 - 150
2020945	Ibuprofen	77.2	84.0	P/P	40 - 150
2020945	Imazapyr	88.1	81.6	P/P	40 - 150
2020945	Imidacloprid	96.2	84.6	P/P	40 - 160
2020945	Linuron	55.3	53.4	P/P	40 - 150
2020945	MCPP	109	114	P/P	40 - 150
2020945	Naproxen	119	107	P/P	40 - 150
2020945	Primidone	62.1	61.0	P/P	40 - 150
2020945	Pyraclostrobin	79.4	73.4	P/P	40 - 150
2020945	Triclopyr	118	124	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P351372

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2020961	Fluoride	101	100	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P351132

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2020931	Organic Carbon	94.6	95.6	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P351337

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2020647	Organic Carbon	92.6	92.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P351091

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2020925	Turbidity	2.96	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P350964

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2020654	Calcium	1.54	Spike	P	0 - 20
2020654	Iron	1.09	Spike	P	0 - 20
2020654	Magnesium	1.22	Spike	P	0 - 20
2020654	Potassium	2.36	Spike	P	0 - 20
2020654	Sodium	1.98	Spike	P	0 - 20
2020654	Zinc	2.87	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P350964

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2020654	Arsenic	0.432	Spike	P	0 - 20
2020654	Cadmium	2.18	Spike	P	0 - 20
2020654	Chromium	1.05	Spike	P	0 - 20
2020654	Copper	0.672	Spike	P	0 - 20
2020654	Lead	0.662	Spike	P	0 - 20
2020654	Nickel	0.452	Spike	P	0 - 20
2020654	Silver	0.801	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P351227

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2020917	Chloride	5.78	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P351229

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2020917	Sulfate	9.26	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P351086

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2020693	Ammonia-N	1.96	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P350984

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2020918	Kjeldahl Nitrogen	0.743	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351129

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2020749	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351130

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2020931	NO2NO3-N	0.818	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351011

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2020832	Total-P	0.604	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351012

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2020974	Total-P	1.47	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P350974

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2020963	O-Phosphate-P	0.515	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P350888

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2020849	Aldrin	2.03	Spike	P	0 - 30
2020849	Alpha-BHC	3.20	Spike	P	0 - 30
2020849	Alpha-Chlordane	3.35	Spike	P	0 - 30
2020849	Beta-BHC	30.2	Spike	F	0 - 30
2020849	Carbophenothion	2.24	Spike	P	0 - 30
2020849	Chlorothalonil	11.4	Spike	P	0 - 30
2020849	Cypermethrin	2.34	Spike	P	0 - 30
2020849	DDD-p,p'	6.75	Spike	P	0 - 30
2020849	DDE-p,p'	3.45	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P350888

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2020849	DDT-p,p'	2.82	Spike	P	0 - 30
2020849	Delta-BHC	24.6	Spike	P	0 - 30
2020849	Dicofol	10.1	Spike	P	0 - 30
2020849	Dieldrin	2.42	Spike	P	0 - 30
2020849	Endosulfan I	0.111	Spike	P	0 - 30
2020849	Endosulfan II	15.6	Spike	P	0 - 30
2020849	Endosulfan Sulfate	0.143	Spike	P	0 - 30
2020849	Endrin	2.09	Spike	P	0 - 30
2020849	Endrin Aldehyde	3.24	Spike	P	0 - 30
2020849	Endrin Ketone	5.12	Spike	P	0 - 30
2020849	Gamma-BHC	30.2	Spike	F	0 - 30
2020849	Gamma-Chlordane	4.99	Spike	P	0 - 30
2020849	Heptachlor	2.86	Spike	P	0 - 30
2020849	Heptachlor Epoxide	3.08	Spike	P	0 - 30
2020849	Methoxychlor	1.91	Spike	P	0 - 30
2020849	Mirex	7.94	Spike	P	0 - 30
2020849	Permethrin	1.87	Spike	P	0 - 30
2020849	Trifluralin	9.11	Spike	P	0 - 30
LFB	Aldrin	14.4	LCS	P	0 - 30
LFB	Alpha-BHC	19.5	LCS	P	0 - 30
LFB	Alpha-Chlordane	10.8	LCS	P	0 - 30
LFB	Beta-BHC	7.80	LCS	P	0 - 30
LFB	Carbophenothion	20.5	LCS	P	0 - 30
LFB	Chlorothalonil	43.5	LCS	F	0 - 30
LFB	Cypermethrin	21.0	LCS	P	0 - 30
LFB	DDD-p,p'	9.84	LCS	P	0 - 30
LFB	DDE-p,p'	12.4	LCS	P	0 - 30
LFB	DDT-p,p'	18.1	LCS	P	0 - 30
LFB	Delta-BHC	9.64	LCS	P	0 - 30
LFB	Dicofol	16.1	LCS	P	0 - 30
LFB	Dieldrin	11.1	LCS	P	0 - 30
LFB	Endosulfan I	8.92	LCS	P	0 - 30
LFB	Endosulfan II	23.5	LCS	P	0 - 30
LFB	Endosulfan Sulfate	20.5	LCS	P	0 - 30
LFB	Endrin	7.90	LCS	P	0 - 30
LFB	Endrin Aldehyde	15.2	LCS	P	0 - 30
LFB	Endrin Ketone	18.9	LCS	P	0 - 30
LFB	Gamma-BHC	2.76	LCS	P	0 - 30
LFB	Gamma-Chlordane	10.5	LCS	P	0 - 30
LFB	Heptachlor	15.0	LCS	P	0 - 30
LFB	Heptachlor Epoxide	9.50	LCS	P	0 - 30
LFB	Methoxychlor	14.4	LCS	P	0 - 30
LFB	Mirex	19.1	LCS	P	0 - 30
LFB	Permethrin	15.7	LCS	P	0 - 30
LFB	Trifluralin	17.6	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P350967

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report

Precision

Reference Method: EPA 8270D

Batch ID: P350967

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2020949	Acetochlor	3.47	Spike	P	0 - 30
2020949	Alachlor	2.72	Spike	P	0 - 30
2020949	Ametryn	13.1	Spike	P	0 - 30
2020949	Atrazine	0.305	Spike	P	0 - 30
2020949	Atrazine Desethyl	9.55	Spike	P	0 - 30
2020949	Azinphos Methyl	14.2	Spike	P	0 - 30
2020949	Bromacil	3.42	Spike	P	0 - 30
2020949	Butylate	20.9	Spike	P	0 - 30
2020949	Chlorpyrifos Ethyl	0.128	Spike	P	0 - 30
2020949	Chlorpyrifos Methyl	0.987	Spike	P	0 - 30
2020949	Cyanazine	47.6	Spike	F	0 - 30
2020949	Demeton	5.66	Spike	P	0 - 30
2020949	Diazinon	7.26	Spike	P	0 - 30
2020949	Disulfoton	6.82	Spike	P	0 - 30
2020949	EPTC	20.3	Spike	P	0 - 30
2020949	Ethion	69.5	Spike	F	0 - 30
2020949	Ethoprop	1.20	Spike	P	0 - 30
2020949	Fenamiphos	10.6	Spike	P	0 - 30
2020949	Fipronil	4.67	Spike	P	0 - 30
2020949	Fipronil Sulfide	8.37	Spike	P	0 - 30
2020949	Fipronil Sulfone	3.87	Spike	P	0 - 30
2020949	Fonofos	0.182	Spike	P	0 - 30
2020949	Hexazinone	4.00	Spike	P	0 - 30
2020949	Malathion	0.524	Spike	P	0 - 30
2020949	Metalaxyl	2.80	Spike	P	0 - 30
2020949	Metolachlor	15.9	Spike	P	0 - 30
2020949	Metribuzin	3.07	Spike	P	0 - 30
2020949	Mevinphos	0.947	Spike	P	0 - 30
2020949	Molinate	5.01	Spike	P	0 - 30
2020949	Norflurazon	1.03	Spike	P	0 - 30
2020949	Parathion Ethyl	2.16	Spike	P	0 - 30
2020949	Parathion Methyl	1.69	Spike	P	0 - 30
2020949	Pendimethalin	1.85	Spike	P	0 - 30
2020949	Phorate	1.35	Spike	P	0 - 30
2020949	Prometon	8.01	Spike	P	0 - 30
2020949	Prometryn	7.26	Spike	P	0 - 30
2020949	Simazine	9.37	Spike	P	0 - 30
2020949	Terbufos	0.0909	Spike	P	0 - 30
2020949	Terbutylazine	9.43	Spike	P	0 - 30
LFB	Acetochlor	4.09	LCS	P	0 - 30
LFB	Alachlor	4.18	LCS	P	0 - 30
LFB	Ametryn	2.71	LCS	P	0 - 30
LFB	Atrazine	4.67	LCS	P	0 - 30
LFB	Atrazine Desethyl	0.797	LCS	P	0 - 30
LFB	Azinphos Methyl	6.00	LCS	P	0 - 30
LFB	Bromacil	2.96	LCS	P	0 - 30
LFB	Butylate	26.0	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	3.39	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	3.96	LCS	P	0 - 30
LFB	Cyanazine	7.99	LCS	P	0 - 30
LFB	Demeton	16.9	LCS	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270D

Batch ID: P350967

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Diazinon	5.20	LCS	P	0 - 30
LFB	Disulfoton	31.3	LCS	F	0 - 30
LFB	EPTC	20.8	LCS	P	0 - 30
LFB	Ethion	32.9	LCS	F	0 - 30
LFB	Ethoprop	0.331	LCS	P	0 - 30
LFB	Fenamiphos	8.67	LCS	P	0 - 30
LFB	Fipronil	4.69	LCS	P	0 - 30
LFB	Fipronil Sulfide	2.69	LCS	P	0 - 30
LFB	Fipronil Sulfone	2.47	LCS	P	0 - 30
LFB	Fonofos	8.51	LCS	P	0 - 30
LFB	Hexazinone	4.18	LCS	P	0 - 30
LFB	Malathion	1.52	LCS	P	0 - 30
LFB	Metaxyl	5.29	LCS	P	0 - 30
LFB	Metolachlor	1.27	LCS	P	0 - 30
LFB	Metribuzin	11.0	LCS	P	0 - 30
LFB	Mevinphos	8.17	LCS	P	0 - 30
LFB	Molinate	11.0	LCS	P	0 - 30
LFB	Norflurazon	0.659	LCS	P	0 - 30
LFB	Parathion Ethyl	0.701	LCS	P	0 - 30
LFB	Parathion Methyl	6.67	LCS	P	0 - 30
LFB	Pendimethalin	4.14	LCS	P	0 - 30
LFB	Phorate	9.07	LCS	P	0 - 30
LFB	Prometon	0.744	LCS	P	0 - 30
LFB	Prometryn	1.53	LCS	P	0 - 30
LFB	Simazine	6.66	LCS	P	0 - 30
LFB	Terbufos	4.65	LCS	P	0 - 30
LFB	Terbutylazine	0.312	LCS	P	0 - 30

Reference Method: EPA 8276

Batch ID: P350888

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2021035	Chlordane	1.09	Spike	P	0 - 30
2021035	Toxaphene	0.224	Spike	P	0 - 30
LFB	Chlordane	17.2	LCS	P	0 - 30
LFB	Toxaphene	6.34	LCS	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P350895

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2020679	Acesulfame K	16.2	Spike	P	0 - 30
2020679	Endothall	3.95	Spike	P	0 - 30
2020679	Sucralose	1.58	Spike	P	0 - 30
2021075	AMPA	0.983	Spike	P	0 - 30
2021075	Glufosinate	12.9	Spike	P	0 - 30
2021075	Glyphosate	1.96	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8321B

Batch ID: P350923

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2020943	3-Hydroxycarbofuran	7.29	Spike	P	0 - 30
2020943	Aldicarb	4.06	Spike	P	0 - 30
2020943	Aldicarb Sulfone	15.1	Spike	P	0 - 30
2020943	Aldicarb Sulfoxide	14.6	Spike	P	0 - 30
2020943	Carbaryl	2.88	Spike	P	0 - 30
2020943	Carbofuran	15.0	Spike	P	0 - 30
2020943	Methiocarb	14.8	Spike	P	0 - 30
2020943	Methomyl	2.03	Spike	P	0 - 30
2020943	Oxamyl	8.78	Spike	P	0 - 30
2020943	Propoxur	6.47	Spike	P	0 - 30
2020945	2,4-D	6.51	Spike	P	0 - 30
2020945	Acetaminophen	0.965	Spike	P	0 - 30
2020945	Bentazon	12.5	Spike	P	0 - 30
2020945	Carbamazepine	15.0	Spike	P	0 - 30
2020945	Diuron	1.47	Spike	P	0 - 30
2020945	Fenuron	9.95	Spike	P	0 - 30
2020945	Fluridone	2.48	Spike	P	0 - 30
2020945	Hydrocodone	6.75	Spike	P	0 - 30
2020945	Ibuprofen	8.41	Spike	P	0 - 30
2020945	Imazapyr	6.95	Spike	P	0 - 30
2020945	Imidacloprid	12.8	Spike	P	0 - 30
2020945	Linuron	3.57	Spike	P	0 - 30
2020945	MCPP	3.79	Spike	P	0 - 30
2020945	Naproxen	10.8	Spike	P	0 - 30
2020945	Primidone	1.79	Spike	P	0 - 30
2020945	Pyraclostrobin	7.90	Spike	P	0 - 30
2020945	Triclopyr	4.43	Spike	P	0 - 30

Reference Method: SM 2120 B

Batch ID: P350971

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2020929	Color (true)	2.52	Sample	P	0 - 20

Reference Method: SM 2320 B-97

Batch ID: P351367

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2020961	Total Alkalinity	0.119	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97

Batch ID: P351241

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2020917	TDS	4.72	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P351372

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2020961	Fluoride	0.484	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P351132

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2020931	Organic Carbon	0.724	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P351337

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2020647	Organic Carbon	0.263	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: 2020943

Field Sample ID: G2WA0012

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	38.2	P	30 - 160

Lab Sample ID: 2020944

Field Sample ID: G2WA0004

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	41.5	P	30 - 160

Lab Sample ID: 2020945

Field Sample ID: G2WA0012

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	110	P	30 - 160
EPA 8321B	Acetaminophen-d4	113	P	30 - 160
EPA 8321B	Carbamazepine-d10	48.1	P	30 - 160
EPA 8321B	Diuron-d6	49.2	P	30 - 160
EPA 8321B	Endothall-d6	143	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	92.2	P	40 - 160
EPA 8321B	Ibuprofen-d3	78.2	P	30 - 160
EPA 8321B	Primidone-d5	54.6	P	30 - 160
EPA 8321B	Sucralose-d6	133	P	40 - 160

Lab Sample ID: 2020946

Field Sample ID: G2WA0004

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	114	P	30 - 160
EPA 8321B	Acetaminophen-d4	127	P	30 - 160
EPA 8321B	Carbamazepine-d10	54.1	P	30 - 160
EPA 8321B	Diuron-d6	50.7	P	30 - 160
EPA 8321B	Endothall-d6	125	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	103	P	40 - 160
EPA 8321B	Ibuprofen-d3	75.9	P	30 - 160
EPA 8321B	Primidone-d5	68.8	P	30 - 160
EPA 8321B	Sucralose-d6	139	P	40 - 160

Lab Sample ID: 2020947

Field Sample ID: G2WA0012

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	81.6	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	58.7	P	34 - 101
EPA 8276	Decachlorobiphenyl	67.0	P	31 - 108
EPA 8276	PCNB	92.2	P	62 - 142

Lab Sample ID: 2020948

Field Sample ID: G2WA0004

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	77.6	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	53.6	P	34 - 101
EPA 8276	Decachlorobiphenyl	48.0	P	31 - 108

Quality Assurance Report Surrogates

Lab Sample ID: 2020948
Field Sample ID: G2WA0004

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8276	PCNB	89.3	P	62 - 142

Lab Sample ID: 2020949
Field Sample ID: G2WA0012

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	123	P	71 - 126
EPA 8270D	Terbufos-d10	118	P	59 - 149

Lab Sample ID: 2020950
Field Sample ID: G2WA0004

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	123	P	71 - 126
EPA 8270D	Terbufos-d10	119	P	59 - 149

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A86213

Included Lab Sample IDs: 2020925, 2020928, 2020929

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.1	99.4	P/P	90 - 115
Color (true)	98.7	98.1	P/P	90 - 115
Color (true)	99.4	98.8	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A86214

Included Lab Sample IDs: 2020927, 2020932, 2020933

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

Reference Method: EPA 8321B

Run ID: A86218

Included Lab Sample IDs: 2020945, 2020946

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	94.1	85.3	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A86253

Included Lab Sample IDs: 2020945, 2020946

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	69.0	68.2	P/P	50 - 150
3-Hydroxycarbofuran	94.8	97.7	P/P	50 - 150
Acetaminophen	114	111	P/P	60 - 160
Aldicarb	86.9	67.7	P/P	60 - 150
Aldicarb Sulfone	102	107	P/P	50 - 150
Aldicarb Sulfoxide	117	111	P/P	50 - 150
Bentazon	65.6	62.4	P/P	50 - 160
Carbamazepine	75.6	71.8	P/P	60 - 160
Carbaryl	98.0	76.3	P/P	60 - 150
Carbofuran	68.6	64.6	P/P	50 - 150
Diuron	78.2	63.2	P/P	60 - 150
Fenuron	94.1	97.0	P/P	60 - 150
Fluridone	72.5	72.9	P/P	60 - 160
Hydrocodone	108	99.0	P/P	60 - 150
Ibuprofen	125	138	P/P	50 - 160
Imazapyr	87.9	78.5	P/P	50 - 150
Imidacloprid	78.8	75.4	P/P	60 - 150
Linuron	82.4	83.9	P/P	60 - 150
MCPP	68.8	72.5	P/P	50 - 150
Methiocarb	79.1	72.3	P/P	50 - 150
Methomyl	108	112	P/P	50 - 150
Naproxen	69.7	75.0	P/P	50 - 160
Oxamyl	122	113	P/P	50 - 150
Primidone	94.4	92.9	P/P	60 - 150
Propoxur	79.1	73.4	P/P	50 - 150
Pyraclostrobin	97.7	93.3	P/P	60 - 150
Triclopyr	83.9	84.3	P/P	50 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A86261

Included Lab Sample IDs: 2020945, 2020946

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	116	123	P/P	60 - 160
Glufosinate	93.6	97.7	P/P	60 - 160
Glyphosate	98.0	104	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A86262

Included Lab Sample IDs: 2020945, 2020946

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	99.6	118	P/P	60 - 160
Endothall	103	109	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A86265

Included Lab Sample IDs: 2020926, 2020930, 2020931

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.5	98.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A86275

Included Lab Sample IDs: 2020926, 2020930, 2020931

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	107	106	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A86276

Included Lab Sample IDs: 2020926, 2020930, 2020931

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	103	101	P/P	90 - 110
Ammonia-N	99.3	103	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A86280

Included Lab Sample IDs: 2020925, 2020928, 2020929

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A86281

Included Lab Sample IDs: 2020951, 2020952

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	96.4	94.8	P/P	90 - 110
Calcium	97.3	96.4	P/P	90 - 110
Iron	90.8	91.2	P/P	90 - 110
Iron	93.3	90.8	P/P	90 - 110
Magnesium	94.7	94.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A86281

Included Lab Sample IDs: 2020951, 2020952

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Magnesium	96.7	94.7	P/P	90 - 110
Potassium	101	101	P/P	90 - 110
Potassium	101	101	P/P	90 - 110
Sodium	97.6	98.7	P/P	90 - 110
Sodium	98.7	96.9	P/P	90 - 110
Zinc	100	99.3	P/P	90 - 110
Zinc	99.3	98.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A86298

Included Lab Sample IDs: 2020926, 2020930, 2020931

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

Reference Method: SM 5310 B-00

Run ID: A86299

Included Lab Sample IDs: 2020931

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.4	94.3	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A86307

Included Lab Sample IDs: 2020951, 2020952

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Lead	95.8	94.6	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A86312

Included Lab Sample IDs: 2020925, 2020928, 2020929

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	106	103	P/P	90 - 110
Chloride	108	106	P/P	90 - 110
Sulfate	103	100	P/P	90 - 110
Sulfate	107	103	P/P	90 - 110

Reference Method: EPA 8270D

Run ID: A86316

Included Lab Sample IDs: 2020947, 2020948

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	95.5		P	80 - 120
Alpha-BHC	100		P	80 - 120
Alpha-Chlordane	96.6		P	80 - 120
Beta-BHC	98.7		P	80 - 120
Carbophenothion	84.7		P	80 - 120
Chlorothalonil	85.3		P	80 - 120
Cypermethrin	82.0		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A86316

Included Lab Sample IDs: 2020947, 2020948

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
DDD-p,p'	95.4		P	80 - 120
DDE-p,p'	96.8		P	80 - 120
DDT-p,p'	109		P	80 - 120
Delta-BHC	94.3		P	80 - 120
Dicofol	101		P	80 - 120
Dieldrin	99.6		P	80 - 120
Endosulfan I	94.3		P	80 - 120
Endosulfan II	104		P	80 - 120
Endosulfan Sulfate	95.0		P	80 - 120
Endrin	93.5		P	80 - 120
Endrin Aldehyde	91.2		P	80 - 120
Endrin Ketone	98.1		P	80 - 120
Gamma-BHC	98.7		P	80 - 120
Gamma-Chlordane	96.3		P	80 - 120
Heptachlor	94.9		P	80 - 120
Heptachlor Epoxide	96.0		P	80 - 120
Methoxychlor	104		P	80 - 120
Mirex	99.5		P	80 - 120
Permethrin	90.7		P	80 - 120
Trifluralin	93.8		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A86337

Included Lab Sample IDs: 2020951, 2020952

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	96.8	94.4	P/P	90 - 110
Cadmium	95.2	96.4	P/P	90 - 110
Chromium	98.8	98.6	P/P	90 - 110
Copper	95.7	93.2	P/P	90 - 110
Nickel	95.2	93.5	P/P	90 - 110
Silver	95.3	94.5	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A86364

Included Lab Sample IDs: 2020947, 2020948

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	94.3		P	80 - 120
Toxaphene	103		P	80 - 120

Reference Method: SM 5310 B-00

Run ID: A86377

Included Lab Sample IDs: 2020926, 2020930

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	93.2	95.7	P/P	90 - 110
Organic Carbon	95.7	93.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-97

Run ID: A86387

Included Lab Sample IDs: 2020925, 2020928, 2020929

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	100	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A86387

Included Lab Sample IDs: 2020925, 2020928, 2020929

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

Reference Method: EPA 8270D

Run ID: A86499

Included Lab Sample IDs: 2020949, 2020950

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	96.4		P	80 - 120
Alachlor	99.3		P	80 - 120
Ametryn	100		P	80 - 120
Atrazine	99.0		P	80 - 120
Atrazine Desethyl	98.3		P	80 - 120
Azinphos Methyl	85.5		P	80 - 120
Bromacil	100		P	80 - 120
Butylate	96.6		P	80 - 120
Chlorpyrifos Ethyl	93.4		P	80 - 120
Chlorpyrifos Methyl	96.5		P	80 - 120
Cyanazine	88.9		P	80 - 120
Demeton	105		P	80 - 120
Diazinon	94.4		P	80 - 120
Disulfoton	96.8		P	80 - 120
EPTC	97.4		P	80 - 120
Ethion	93.3		P	80 - 120
Ethoprop	101		P	80 - 120
Fenamiphos	93.4		P	80 - 120
Fipronil	96.0		P	80 - 120
Fipronil Sulfide	96.4		P	80 - 120
Fipronil Sulfone	95.6		P	80 - 120
Fonofos	97.1		P	80 - 120
Hexazinone	96.7		P	80 - 120
Malathion	92.2		P	80 - 120
Metaxyl	103		P	80 - 120
Metolachlor	101		P	80 - 120
Metribuzin	95.0		P	80 - 120
Mevinphos	94.9		P	80 - 120
Molinate	95.0		P	80 - 120
Norflurazon	92.1		P	80 - 120
Parathion Ethyl	91.0		P	80 - 120
Parathion Methyl	96.1		P	80 - 120
Pendimethalin	97.9		P	80 - 120
Phorate	97.7		P	80 - 120
Prometon	95.4		P	80 - 120
Prometryn	95.6		P	80 - 120
Simazine	97.9		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A86499

Included Lab Sample IDs: 2020949, 2020950

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Terbufos	96.3		P	80 - 120
Terbutylazine	97.2		P	80 - 120

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

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							2.96	
EPA 200.7 Rev. 4.4	Calcium	102		104	99.7				1.54
	Iron	102		99.3	99.5	98.4			1.09
	Magnesium	109		105	105	103			1.22
	Potassium	110		106	110	107			2.36
	Sodium	101		101	97.7				1.98
	Zinc	103		103	104	101			2.87
EPA 200.8 Rev. 5.4	Arsenic	93.8		99.8	101	102			0.432
	Cadmium	93.0		98.4	101	103			2.18
	Chromium	88.5		94.9	97.9	96.9			1.05
	Copper	87.3		95.4	96.1	96.8			0.672
	Lead	91.5		97.4	100	101			0.662
	Nickel	89.8		95.4	97.1	97.5			0.452
	Silver	92.7		95.4	95.9	96.7			0.801
EPA 300.0 Rev. 2.1	Chloride	103		101	96.6			5.78	
	Sulfate	100		98.1	91.7			9.26	
EPA 350.1 Rev. 2.0	Ammonia-N	103		99.8	97.6				1.96
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103		105	104				0.743
EPA 353.2 Rev. 2.0	NO2NO3-N	102		99.0	99.0				0.0
	NO2NO3-N	102		101					0.818
EPA 365.1 Rev. 2.0	Total-P	101		97.8	97.0				0.604
	Total-P	100		96.6	98.2				1.47
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.9		96.8	97.3				0.515
EPA 8270D	Acetochlor	106	110	104	101	4.09			3.47
	Alachlor	107	111	110	107	4.18			2.72
	Aldrin	71.6	62.0	70.7	72.1	14.4			2.03
	Alpha-BHC	97.8	80.4	102	98.4	19.5			3.20
	Alpha-Chlordane	90.8	81.5	92.6	96.1	10.8			3.35
	Ametryn	108	105	118	104	2.71			13.1
	Atrazine	115	120	118	118	4.67			0.305
	Atrazine Desethyl	116	115	163	148	0.797			9.55
	Azinphos Methyl	117	124	113	97.7	6.00			14.2
	Beta-BHC	101	109	97.6	132	7.80			30.2
	Bromacil	93.9	91.2	112	108	2.96			3.42
	Butylate	86.6	66.7	78.8	63.9	26.0			20.9
	Carbophenothion	86.7	70.6	93.5	95.6	20.5			2.24
	Chlorothalonil	39.2	25.2	49.6	44.3	43.5			11.4
	Chlorpyrifos Ethyl	99.2	95.9	87.7	87.6	3.39			0.128
	Chlorpyrifos Methyl	106	102	92.9	93.9	3.96			0.987
	Cyanazine	229	211	64.0	104	7.99			47.6
	Cypermethrin	94.4	76.5	88.8	90.9	21.0			2.34
	DDD-p,p'	98.8	89.5	97.1	104	9.84			6.75
	DDE-p,p'	93.2	82.4	89.8	86.7	12.4			3.45
	DDT-p,p'	106	88.3	112	109	18.1			2.82
	Delta-BHC	104	94.2	113	144	9.64			24.6
	Demeton	92.2	77.8	94.6	100	16.9			5.66
	Diazinon	118	125	134	124	5.20			7.26
	Dicofol	91.3	77.7	90.3	99.9	16.1			10.1
	Dieldrin	95.0	85.0			11.1			2.42
	Disulfoton	104	75.6	90.0	96.3	31.3			6.82
	Endosulfan I	90.1	82.4	92.6	92.5	8.92			0.111
	Endosulfan II	98.9	78.1	107	91.1	23.5			15.6
	Endosulfan Sulfate	92.0	74.9	95.7	95.6	20.5			0.143
	Endrin	96.7	89.4	98.1	100	7.90			2.09

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270D	Endrin Aldehyde	89.4	76.8	86.3	83.5	15.2		3.24
	Endrin Ketone	96.1	79.5	96.8	103	18.9		5.12
	EPTC	62.8	77.4	71.0	57.9	20.8		20.3
	Ethion	75.8	106	10.8	22.2	32.9		69.5
	Ethoprop	98.9	98.5	121	120	0.331		1.20
	Fenamiphos	98.2	90.1	96.8	87.0	8.67		10.6
	Fipronil	108	103	100	95.6	4.69		4.67
	Fipronil Sulfide	96.6	94.0	74.5	81.0	2.69		8.37
	Fipronil Sulfone	87.9	90.0	73.2	76.1	2.47		3.87
	Fonofos	109	119	114	114	8.51		0.182
	Gamma-BHC	107	110	97.6	132	2.76		30.2
	Gamma-Chlordane	88.7	79.9	90.3	95.4	10.5		4.99
	Heptachlor	76.2	65.5	73.8	76.0	15.0		2.86
	Heptachlor Epoxide	90.4	82.2	95.4	92.2	9.50		3.08
	Hexazinone	95.7	99.8	103	107	4.18		4.00
	Malathion	103	105	94.6	95.1	1.52		0.524
	Metalaxyl	108	114	111	108	5.29		2.80
	Methoxychlor	107	92.3	102	99.9	14.4		1.91
	Metolachlor	107	109	119	101	1.27		15.9
	Metribuzin	207	232	225	218	11.0		3.07
	Mevinphos	104	113	123	121	8.17		0.947
	Mirex	91.4	75.5	95.4	88.1	19.1		7.94
	Molinate	69.2	62.0	56.2	53.5	11.0		5.01
	Norflurazon	103	103	94.5	93.5	0.659		1.03
	Parathion Ethyl	102	103	101	103	0.701		2.16
	Parathion Methyl	111	119	115	117	6.67		1.69
	Pendimethalin	109	113	118	116	4.14		1.85
	Permethrin	91.7	78.4	95.3	93.5	15.7		1.87
	Phorate	97.9	107	85.8	84.3	9.07		1.35
	Prometon	97.3	98.0	99.0	91.3	0.744		8.01
	Prometryn	107	109	109	102	1.53		7.26
	Simazine	112	119	120	110	6.66		9.37
	Terbufos	109	114	121	121	4.65		0.0909
	Terbutylazine	111	110	123	112	0.312		9.43
	Trifluralin	92.9	77.9	98.4	89.8	17.6		9.11
EPA 8276	Chlordane	86.9	103	114	115	17.2		1.09
	Toxaphene	67.0	71.3	69.5	69.7	6.34		0.224
EPA 8321B	2,4-D	67.7		99.8	107			6.51
	3-Hydroxycarbofuran	96.0		54.4	58.5			7.29
	Acesulfame K	103		68.1	57.9			16.2
	Acetaminophen	113		127	126			0.965
	Aldicarb	91.4		30.4	31.6			4.06
	Aldicarb Sulfone	108		62.4	72.6			15.1
	Aldicarb Sulfoxide	110		31.3	36.2			14.6
	AMPA	86.1		73.8	74.5			0.983
	Bentazon	59.1		20.8	18.4			12.5
	Carbamazepine	70.4		56.4	48.5			15.0
	Carbaryl	67.0		48.1	46.7			2.88
	Carbofuran	60.6		51.4	59.8			15.0
	Diuron	65.8		46.5	45.9			1.47
	Endothall	86.8		103	107			3.95
	Fenuron	93.5		44.4	40.2			9.95
	Fluridone	86.7		60.6	59.1			2.48
	Glufosinate	84.0		86.7	76.2			12.9

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Glyphosate	70.9	71.5	72.9		1.96
	Hydrocodone	110	95.7	89.5		6.75
	Ibuprofen	72.9	84.0	77.2		8.41
	Imazapyr	91.0	88.1	81.6		6.95
	Imidacloprid	105	96.2	84.6		12.8
	Linuron	60.5	55.3	53.4		3.57
	MCPP	73.5	114	109		3.79
	Methiocarb	53.5	42.4	49.2		14.8
	Methomyl	99.7	50.2	51.2		2.03
	Naproxen	94.1	119	107		10.8
	Oxamyl	114	68.0	74.2		8.78
	Primidone	105	62.1	61.0		1.79
	Propoxur	58.3	36.3	34.0		6.47
	Pyraclostrobin	72.9	79.4	73.4		7.90
	Sucralose	92.8	91.4	93.1		1.58
	Triclopyr	49.2	118	124		4.43
SM 2120 B	Color (true)	99.7			2.52	
SM 2320 B-97	Total Alkalinity	102			0.119	
SM 2540 C-97	TDS				4.72	
SM 4500 F-C-97	Fluoride	100	101	100		0.484
SM 5310 B-00	Organic Carbon	95.5	94.6	95.6		0.724
	Organic Carbon	95.4	92.6	92.2		0.263

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2020925, 2020928, 2020929
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2020951, 2020952
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2020951, 2020952
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2020925, 2020928, 2020929
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2020925, 2020928, 2020929
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2020926, 2020930, 2020931
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2020926, 2020930, 2020931
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2020926, 2020930, 2020931
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2020926, 2020930, 2020931
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2020927, 2020932, 2020933
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	2020947, 2020948
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	2020949, 2020950
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2020947, 2020948
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	2020943, 2020944
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2020945, 2020946
SM 2120 B / E31780	True Color measured at 450 nm	2020925, 2020928, 2020929
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2020925, 2020928, 2020929

Reference Method Descriptions

Method / DoH Cert #	Description	<u>Associated Samples</u>
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2020925, 2020928, 2020929
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2020925, 2020928, 2020929
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2020925, 2020928, 2020929
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2020926, 2020930, 2020931

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	08/29/2018			08/30/2018 16:04	Megan Treadwell	2020925, 2020928, 2020929
EPA 200.7 Rev. 4.4	08/29/2018	08/30/2018 14:20	Elliott D. Healy	08/31/2018 16:40	Martin Acosta	2020951
	08/29/2018	08/30/2018 14:20	Elliott D. Healy	08/31/2018 17:07	Martin Acosta	2020952
EPA 200.8 Rev. 5.4	08/29/2018	08/30/2018 14:20	Elliott D. Healy	09/05/2018 16:43	Allison Taylor	2020951
	08/29/2018	08/30/2018 14:20	Elliott D. Healy	09/05/2018 16:53	Allison Taylor	2020952
	08/29/2018	08/30/2018 14:20	Elliott D. Healy	09/06/2018 22:54	Allison Taylor	2020951
	08/29/2018	08/30/2018 14:20	Elliott D. Healy	09/06/2018 23:03	Allison Taylor	2020952
EPA 300.0 Rev. 2.1	08/29/2018			09/06/2018 15:27	Lipi Saha	2020925
	08/29/2018			09/06/2018 15:39	Lipi Saha	2020928
	08/29/2018			09/06/2018 16:15	Lipi Saha	2020929
EPA 350.1 Rev. 2.0	08/29/2018			09/04/2018 12:10	Ping Hua	2020926
	08/29/2018			09/04/2018 12:17	Ping Hua	2020930
	08/29/2018			09/04/2018 12:19	Ping Hua	2020931
EPA 351.2 Rev. 2.0	08/29/2018	08/31/2018 15:00	Adrian Shelby	09/04/2018 14:26	Joseph Suarez	2020926
	08/29/2018	08/31/2018 15:00	Adrian Shelby	09/04/2018 14:28	Joseph Suarez	2020930
	08/29/2018	08/31/2018 15:00	Adrian Shelby	09/04/2018 14:30	Joseph Suarez	2020931
EPA 353.2 Rev. 2.0	08/29/2018			09/05/2018 14:50	Lauren Bottorf	2020926
	08/29/2018			09/05/2018 14:51	Lauren Bottorf	2020930
	08/29/2018			09/05/2018 14:58	Lauren Bottorf	2020931
EPA 365.1 Rev. 2.0	08/29/2018	08/31/2018 12:15	Sima Feizi	09/04/2018 10:51	Beverly Y. Sanders	2020926
	08/29/2018	08/31/2018 12:15	Sima Feizi	09/04/2018 10:52	Beverly Y. Sanders	2020930
	08/29/2018	08/31/2018 12:15	Sima Feizi	09/04/2018 10:55	Beverly Y. Sanders	2020931
EPA 365.1 Rev. 2.0 dissolved	08/29/2018			08/30/2018 16:18	Julia Storbeck	2020927
	08/29/2018			08/30/2018 16:19	Julia Storbeck	2020932
	08/29/2018			08/30/2018 16:20	Julia Storbeck	2020933
EPA 8270D	08/29/2018	08/31/2018 08:00	Fe-Val Siddell	09/05/2018 22:18	Dinesh Mishra	2020947
	08/29/2018	08/31/2018 08:00	Fe-Val Siddell	09/05/2018 22:50	Dinesh Mishra	2020948
	08/29/2018	08/31/2018 09:38	Rasheda Ghaffari	09/06/2018 16:13	Marek Topolski	2020949
	08/29/2018	08/31/2018 09:38	Rasheda Ghaffari	09/06/2018 16:37	Marek Topolski	2020950
EPA 8276	08/29/2018	08/31/2018 08:00	Fe-Val Siddell	09/05/2018 20:59	Arthur Maknenko	2020947
	08/29/2018	08/31/2018 08:00	Fe-Val Siddell	09/05/2018 21:55	Arthur Maknenko	2020948
EPA 8321B	08/29/2018	08/30/2018 15:00	Mohammad Ghaffari	08/30/2018 22:47	Mohammad Ghaffari	2020945
	08/29/2018	08/30/2018 15:00	Mohammad Ghaffari	08/30/2018 23:01	Mohammad Ghaffari	2020946
	08/29/2018	08/30/2018 15:00	Mohammad Ghaffari	08/31/2018 11:41	Mohammad Ghaffari	2020945
	08/29/2018	08/30/2018 15:00	Mohammad Ghaffari	08/31/2018 11:55	Mohammad Ghaffari	2020946
	08/29/2018	08/30/2018 15:00	Mohammad Ghaffari	08/31/2018 16:17	Mohammad Ghaffari	2020945
	08/29/2018	08/30/2018 15:00	Mohammad Ghaffari	08/31/2018 16:28	Mohammad Ghaffari	2020946
	08/29/2018	08/31/2018 13:30	Hoor Shaik	09/01/2018 09:07	Juyoung Kim	2020943
	08/29/2018	08/31/2018 13:30	Hoor Shaik	09/01/2018 09:41	Juyoung Kim	2020944
	08/29/2018	08/31/2018 13:30	Hoor Shaik	09/01/2018 12:00	Juyoung Kim	2020945

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	08/29/2018	08/31/2018 13:30	Hoor Shaik	09/01/2018 13:09	Juyoung Kim	2020946
	08/29/2018	08/31/2018 13:30	Hoor Shaik	09/02/2018 00:42	Juyoung Kim	2020945
	08/29/2018	08/31/2018 13:30	Hoor Shaik	09/02/2018 01:51	Juyoung Kim	2020946
SM 2120 B	08/29/2018			08/30/2018 14:55	DeAsia Armster	2020929
	08/29/2018			08/30/2018 15:11	DeAsia Armster	2020925
	08/29/2018			08/30/2018 15:16	DeAsia Armster	2020928
SM 2320 B-97	08/29/2018			09/07/2018 05:49	Dale L. Simmons	2020925
	08/29/2018			09/07/2018 05:59	Dale L. Simmons	2020928
	08/29/2018			09/07/2018 06:09	Dale L. Simmons	2020929
SM 2540 C-97	08/29/2018			08/30/2018 14:22	Yijie Li	2020925, 2020928, 2020929
SM 2540 D-97	08/29/2018			08/30/2018 14:22	Yijie Li	2020925, 2020928, 2020929
SM 4500 F-C-97	08/29/2018			09/07/2018 05:49	Dale L. Simmons	2020925
	08/29/2018			09/07/2018 05:59	Dale L. Simmons	2020928
	08/29/2018			09/07/2018 06:09	Dale L. Simmons	2020929
SM 5310 B-00	08/29/2018			09/04/2018 18:39	Megan Treadwell	2020931
	08/29/2018			09/08/2018 04:02	Megan Treadwell	2020926
	08/29/2018			09/08/2018 04:45	Megan Treadwell	2020930