

Chemical Analysis Report

SW-DIST-2018-05-31-01

Florida Department of Environmental Protection
Central Laboratory
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DOH Accreditation E31780

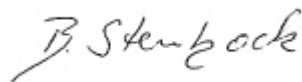
Event Description: **Alafia, Delany, Thirtymile**
Request ID: **RQ-2018-05-28-05**
Customer: **SW-DIST**
Project ID: **SMP**

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Date Certified: 25-JUN-2018 09:49



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: Alafia River @ Center Ave

Collection Date/Time: 05/30/2018 10:40

Field ID: G2SW0045

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1996333	EPA 180.1 Rev. 2.0	Turbidity	8.1		NTU	P346210	
	EPA 300.0 Rev. 2.1	Chloride	20		mg Cl/L	P346344	
		Sulfate	40		mg SO4/L	P346345	
		Color (true)	170		PCU	P346197	
	SM 2320 B-97	Total Alkalinity	65		mg CaCO3/L	P346303	
	SM 2540 C-97	TDS	214		mg/L	P346475	
	SM 2540 D-97	TSS	8	I	mg/L	P346447	
	SM 4500 F-C-97	Fluoride	0.85		mg F/L	P346304	
1996334	EPA 350.1 Rev. 2.0	Ammonia-N	0.040		mg N/L	P346691	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P346461	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.28		mg N/L	P346268	
	EPA 365.1 Rev. 2.0	Total-P	1.2		mg P/L	P346386	
	SM 5310 B-00	Organic Carbon	20		mg C/L	P346584	
1996335	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	1.0		mg P/L	P346191	
1996370	EPA 200.7 Rev. 4.4	Calcium	29.8		mg/L	P346311	
		Iron	740		ug/L	P346311	
		Magnesium	10.6		mg/L	P346311	
		Potassium	3.8		mg/L	P346311	
		Sodium	17.5		mg/L	P346311	
		Zinc	5.0	U	ug/L	P346311	
	EPA 200.8 Rev. 5.4	Arsenic	2.84		ug/L	P346311	
		Cadmium	0.110		ug/L	P346311	
		Chromium	1.3	I	ug/L	P346311	
		Copper	1.93		ug/L	P346311	
		Lead	0.46		ug/L	P346311	
		Nickel	1.49		ug/L	P346311	
		Silver	0.014	I	ug/L	P346311	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

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

Sample Location: Alafia River @ Center Ave

Collection Date/Time: 05/30/2018 10:40

Field ID: G2SW0045

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1996356	EPA 8321B	Aldicarb	0.020	U	ug/L	P346184	
		Aldicarb Sulfone	0.0020	U	ug/L	P346184	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P346184	
		Carbaryl	0.0020	U	ug/L	P346184	
		Carbofuran	0.0020	U	ug/L	P346184	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P346184	
		Methiocarb	0.0020	U	ug/L	P346184	
		Methomyl	0.0020	U	ug/L	P346184	
		Oxamyl	0.0020	U	ug/L	P346184	
		Propoxur	0.0020	U	ug/L	P346184	
1996357		2,4-D	0.12		ug/L	P346184	
		Bentazon	0.024	J	ug/L	P346184	MS
		MCP	0.0020	I	ug/L	P346184	
		Triclopyr**	0.0040	U	ug/L	P346184	
		Imidacloprid	0.051		ug/L	P346184	
		Diuron	0.016		ug/L	P346184	
		Pyraclostrobin**	0.0020	U	ug/L	P346184	
		Primidone**	0.0044	I	ug/L	P346184	
		Linuron	0.0040	U	ug/L	P346184	
		Acetaminophen**	0.0080	U	ug/L	P346184	
		Fenuron	0.016	U	ug/L	P346184	
		Imazapyr**	0.10		ug/L	P346184	
		Carbamazepine**	0.0021		ug/L	P346184	
		Fluridone**	0.0064		ug/L	P346184	
		Hydrocodone**	8.0E-04	U	ug/L	P346184	
		Sucralose**	1.2		ug/L	P346245	
		Glyphosate**	0.41		ug/L	P346245	
		AMPA**	0.29	I	ug/L	P346245	
		Endothal**	0.10	U	ug/L	P346245	
		Glufosinate**	0.10	U	ug/L	P346245	
1996364	EPA 8270D	Aldrin	4.1	UJ	ng/L	P346310	RPD
		Alpha-BHC	2.0	U	ng/L	P346310	
		Beta-BHC	4.1	U	ng/L	P346310	
		Delta-BHC	4.1	U	ng/L	P346310	
		Gamma-BHC	4.1	U	ng/L	P346310	
		Carbophenothion	4.1	U	ng/L	P346310	
		Chlorothalonil	2.0	U	ng/L	P346310	
		Cypermethrin	20	UJ	ng/L	P346310	LCS, RPD
		DDD-p,p'	3.1	U	ng/L	P346310	
		DDE-p,p'	3.1	U	ng/L	P346310	
		DDT-p,p'	3.1	U	ng/L	P346310	
		Dieldrin	4.1	U	ng/L	P346310	
		Endosulfan I	4.1	U	ng/L	P346310	
		Endosulfan II	4.1	U	ng/L	P346310	

Field ID: G2SW0045

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1996364	EPA 8270D	Endosulfan Sulfate	2.0	U	ng/L	P346310	
		Endrin	2.0	U	ng/L	P346310	
		Endrin Aldehyde	2.0	U	ng/L	P346310	
		Heptachlor	1.5	UJ	ng/L	P346310	LCS
		Heptachlor Epoxide	2.0	U	ng/L	P346310	
		Methoxychlor	4.1	U	ng/L	P346310	
		Mirex	2.0	UJ	ng/L	P346310	LCS
		Permethrin	10	UJ	ng/L	P346310	LCS
		Trifluralin	1.0	U	ng/L	P346310	
		Alpha-Chlordane	1.0	U	ng/L	P346310	
		Gamma-Chlordane	1.0	U	ng/L	P346310	
		Endrin Ketone	2.0	U	ng/L	P346310	
		Dicofol	31	U	ng/L	P346310	
		Chlordane**	2.9	I	ng/L	P346310	
		Toxaphene**	31	UJ	ng/L	P346310	CCV
1996365	EPA 8270D	Alachlor	0.24	U	ng/L	P346180	
		Ametryn	0.32	U	ng/L	P346180	
		Atrazine	26		ng/L	P346180	
		Atrazine Desethyl	6.6	J	ng/L	P346180	RPD
		Azinphos Methyl	2.2	U	ng/L	P346180	
		Bromacil	28		ng/L	P346180	
		Butylate	0.39	UJ	ng/L	P346180	RPD
		Chlorpyrifos Ethyl	0.24	U	ng/L	P346180	
		Chlorpyrifos Methyl	0.098	U	ng/L	P346180	
		Demeton	2.0	U	ng/L	P346180	
		Diazinon	0.18	I	ng/L	P346180	
		Disulfoton	0.49	U	ng/L	P346180	
		EPTC	1.2	UJ	ng/L	P346180	RPD
		Ethion	0.15	UJ	ng/L	P346180	RPD
		Ethoprop	0.098	U	ng/L	P346180	
		Fenamiphos	0.24	U	ng/L	P346180	
		Fipronil	1.3		ng/L	P346180	
		Fipronil Sulfide	0.39	I	ng/L	P346180	
		Fipronil Sulfone	0.74		ng/L	P346180	
		Hexazinone	11		ng/L	P346180	
		Malathion	0.70	I	ng/L	P346180	
		Metribuzin	0.28	IJ	ng/L	P346180	RPD
		Mevinphos	0.49	U	ng/L	P346180	
		Molinate	0.29	U	ng/L	P346180	
		Norflurazon	5.5		ng/L	P346180	
		Pendimethalin	0.98	U	ng/L	P346180	
		Phorate	0.24	U	ng/L	P346180	
		Prometon	0.88	U	ng/L	P346180	
		Prometryn	0.20	U	ng/L	P346180	
		Simazine	2.8		ng/L	P346180	

Field ID: G2SW0045

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1996365	EPA 8270D	Terbufos	0.098	U	ng/L	P346180	
		Terbutylazine	0.42	U	ng/L	P346180	
		Fonofos	0.20	U	ng/L	P346180	
		Metalaxyl	5.3		ng/L	P346180	
		Metolachlor	2.8		ng/L	P346180	
		Acetochlor	0.24	U	ng/L	P346180	
		Cyanazine	0.49	UJ	ng/L	P346180	RPD
		Parathion Ethyl	0.24	U	ng/L	P346180	
		Parathion Methyl	0.24	U	ng/L	P346180	

Ref. Method and Comment:

EPA 8321B: Refer to the narrative for an explanation of QC Codes.

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

EPA 8276: Refer to the narrative for an explanation of QC Codes.

EPA 8270D: MS accuracy for Atrazine and Bromacil not assessed due to high content of these parameters in the sample spiked.. Refer to the narrative for an explanation of QC Codes.

Sample Location: Delany Creek @ 36th Ave

Collection Date/Time: 05/30/2018 11:35

Field ID: G1SW0046

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1996336	EPA 180.1 Rev. 2.0	Turbidity	14	A	NTU	P346211	
	EPA 300.0 Rev. 2.1	Chloride	20		mg Cl/L	P346344	
		Sulfate	14		mg SO4/L	P346345	
		Color (true)	87		PCU	P346197	
	SM 2320 B-97	Total Alkalinity	76		mg CaCO3/L	P346303	
	SM 2540 C-97	TDS	167		mg/L	P346475	
	SM 2540 D-97	TSS	20		mg/L	P346448	
	SM 4500 F-C-97	Fluoride	0.20		mg F/L	P346304	
1996338	EPA 350.1 Rev. 2.0	Ammonia-N	0.061		mg N/L	P346691	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P346461	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.11		mg N/L	P346268	
	EPA 365.1 Rev. 2.0	Total-P	0.40		mg P/L	P346386	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P346584	
1996340	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.17		mg P/L	P346191	
1996371	EPA 200.7 Rev. 4.4	Calcium	36.9		mg/L	P346311	
		Iron	820		ug/L	P346311	
		Magnesium	2.75		mg/L	P346311	
		Potassium	2.3		mg/L	P346311	
		Sodium	12.0		mg/L	P346311	
		Zinc	8.4	I	ug/L	P346311	
	EPA 200.8 Rev. 5.4	Arsenic	1.83		ug/L	P346311	
		Cadmium	0.052	I	ug/L	P346311	
		Chromium	1.5	I	ug/L	P346311	
		Copper	1.87		ug/L	P346311	
		Lead	1.48		ug/L	P346311	
		Nickel	0.81		ug/L	P346311	
		Silver	0.011	I	ug/L	P346311	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

Sample Location: Delany Creek @ 36th Ave

Collection Date/Time: 05/30/2018 11:35

Field ID: G1SW0046

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1996358	EPA 8321B	Aldicarb	0.020	U	ug/L	P346184	
		Aldicarb Sulfone	0.0020	U	ug/L	P346184	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P346184	
		Carbaryl	0.0020	U	ug/L	P346184	
		Carbofuran	0.0020	U	ug/L	P346184	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P346184	
		Methiocarb	0.0020	U	ug/L	P346184	
		Methomyl	0.0020	U	ug/L	P346184	
		Oxamyl	0.0020	U	ug/L	P346184	
		Propoxur	0.0020	U	ug/L	P346184	
1996360		2,4-D	0.035		ug/L	P346184	
		Bentazon	0.014		ug/L	P346184	MS
		MCP	0.0073	I	ug/L	P346184	
		Triclopyr**	0.0040	U	ug/L	P346184	
		Imidacloprid	0.032		ug/L	P346184	
		Diuron	0.0052	I	ug/L	P346184	
		Pyraclostrobin**	0.0020	U	ug/L	P346184	
		Primidone**	0.0040	U	ug/L	P346184	
		Linuron	0.0040	U	ug/L	P346184	
		Acetaminophen**	0.0080	U	ug/L	P346184	
		Fenuron	0.016	U	ug/L	P346184	
		Imazapyr**	1.4		ug/L	P346184	
		Carbamazepine**	4.5E-04	I	ug/L	P346184	
		Fluridone**	0.027		ug/L	P346184	
		Hydrocodone**	8.0E-04	U	ug/L	P346184	
		Sucralose**	0.21		ug/L	P346245	
		Glyphosate**	5.4		ug/L	P346245	
		AMPA**	1.1		ug/L	P346245	
		Endothal**	0.10	U	ug/L	P346245	
		Glufosinate**	0.10	U	ug/L	P346245	
1996366	EPA 8270D	Aldrin	4.1	UJ	ng/L	P346310	RPD
		Alpha-BHC	2.0	U	ng/L	P346310	
		Beta-BHC	4.1	U	ng/L	P346310	
		Delta-BHC	4.1	U	ng/L	P346310	
		Gamma-BHC	4.1	U	ng/L	P346310	
		Carbophenothion	4.1	U	ng/L	P346310	
		Chlorothalonil	2.0	U	ng/L	P346310	
		Cypermethrin	20	UJ	ng/L	P346310	LCS, RPD
		DDD-p,p'	3.1	U	ng/L	P346310	
		DDE-p,p'	3.1	U	ng/L	P346310	
		DDT-p,p'	3.1	U	ng/L	P346310	
		Dieldrin	4.1	U	ng/L	P346310	
		Endosulfan I	4.1	U	ng/L	P346310	
		Endosulfan II	4.1	U	ng/L	P346310	

Field ID: G1SW0046

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1996366	EPA 8270D	Endosulfan Sulfate	2.0	U	ng/L	P346310	
		Endrin	2.0	U	ng/L	P346310	
		Endrin Aldehyde	2.0	U	ng/L	P346310	
		Heptachlor	1.5	UJ	ng/L	P346310	LCS
		Heptachlor Epoxide	2.0	U	ng/L	P346310	
		Methoxychlor	4.1	U	ng/L	P346310	
		Mirex	2.0	UJ	ng/L	P346310	LCS
		Permethrin	10	UJ	ng/L	P346310	LCS
		Trifluralin	1.0	U	ng/L	P346310	
		Alpha-Chlordane	1.0	U	ng/L	P346310	
		Gamma-Chlordane	1.0	U	ng/L	P346310	
		Endrin Ketone	2.0	U	ng/L	P346310	
		Dicofol	31	U	ng/L	P346310	
		Chlordane**	2.6	U	ng/L	P346310	
		Toxaphene**	31	UJ	ng/L	P346310	CCV
1996368	EPA 8270D						
		Alachlor	0.23	U	ng/L	P346180	
		Ametryn	1.3		ng/L	P346180	
		Atrazine	110		ng/L	P346180	
		Atrazine Desethyl	13	J	ng/L	P346180	RPD
		Azinphos Methyl	2.1	U	ng/L	P346180	
		Bromacil	0.47	U	ng/L	P346180	
		Butylate	0.38	U	ng/L	P346180	RPD
		Chlorpyrifos Ethyl	0.23	U	ng/L	P346180	
		Chlorpyrifos Methyl	0.094	U	ng/L	P346180	
		Demeton	1.9	U	ng/L	P346180	
		Diazinon	0.13	I	ng/L	P346180	
		Disulfoton	0.47	U	ng/L	P346180	
		EPTC	1.2	U	ng/L	P346180	RPD
		Ethion	0.14	U	ng/L	P346180	RPD
		Ethoprop	0.094	U	ng/L	P346180	
		Fenamiphos	0.23	U	ng/L	P346180	
		Fipronil	0.75	I	ng/L	P346180	
		Fipronil Sulfide	0.61		ng/L	P346180	
		Fipronil Sulfone	0.92		ng/L	P346180	
		Hexazinone	2.3		ng/L	P346180	
		Malathion	2.7		ng/L	P346180	
		Metribuzin	0.19	UJ	ng/L	P346180	RPD
		Mevinphos	0.47	U	ng/L	P346180	
		Molinate	0.28	U	ng/L	P346180	
		Norflurazon	0.47	U	ng/L	P346180	
		Pendimethalin	0.94	U	ng/L	P346180	
		Phorate	0.23	U	ng/L	P346180	
		Prometon	0.84	U	ng/L	P346180	
		Prometryn	0.19	U	ng/L	P346180	
		Simazine	1.5	I	ng/L	P346180	

Field ID: G1SW0046

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1996368	EPA 8270D	Terbufos	0.094	U	ng/L	P346180	
		Terbutylazine	0.40	U	ng/L	P346180	
		Fonofos	0.19	U	ng/L	P346180	
		Metalaxyl	0.57	I	ng/L	P346180	
		Metolachlor	0.91	I	ng/L	P346180	
		Acetochlor	0.23	U	ng/L	P346180	
		Cyanazine	0.47	UJ	ng/L	P346180	RPD
		Parathion Ethyl	0.23	U	ng/L	P346180	
		Parathion Methyl	0.23	U	ng/L	P346180	

Ref. Method and Comment:

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

EPA 8276: Refer to the narrative for an explanation of QC Codes.

EPA 8270D: MS accuracy for Atrazine and Bromacil not assessed due to high content of these parameters in the sample spiked. Refer to the narrative for an explanation of QC Codes.

Sample Location: Delany Creek @ Maydell Dr

Collection Date/Time: 05/30/2018 12:00

Field ID: G1SW0066

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1996337	EPA 180.1 Rev. 2.0	Turbidity	11		NTU	P346211	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P346344	
		Sulfate	13		mg SO4/L	P346345	
		Color (true)	94	A	PCU	P346198	
	SM 2320 B-97	Total Alkalinity	71		mg CaCO3/L	P346303	
	SM 2540 C-97	TDS	162	A	mg/L	P346476	
	SM 2540 D-97	TSS	19	A	mg/L	P346448	
	SM 4500 F-C-97	Fluoride	0.19		mg F/L	P346304	
1996339	EPA 350.1 Rev. 2.0	Ammonia-N	0.058		mg N/L	P346691	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P346461	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.10		mg N/L	P346268	
	EPA 365.1 Rev. 2.0	Total-P	0.37		mg P/L	P346386	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P346584	
1996341	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.17		mg P/L	P346191	
1996372	EPA 200.7 Rev. 4.4	Calcium	35.1		mg/L	P346311	
		Iron	790		ug/L	P346311	
		Magnesium	2.77		mg/L	P346311	
		Potassium	2.4		mg/L	P346311	
		Sodium	10.8		mg/L	P346311	
		Zinc	7.5	I	ug/L	P346311	
	EPA 200.8 Rev. 5.4	Arsenic	1.85		ug/L	P346311	
		Cadmium	0.047	I	ug/L	P346311	
		Chromium	1.5	I	ug/L	P346311	
		Copper	1.75		ug/L	P346311	
		Lead	1.22		ug/L	P346311	
		Nickel	0.77	I	ug/L	P346311	
		Silver	0.011	I	ug/L	P346311	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

Sample Location: Delany Creek @ Maydell Dr

Collection Date/Time: 05/30/2018 12:00

Field ID: G1SW0066

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1996359	EPA 8321B	Aldicarb	0.020	U	ug/L	P346184	
		Aldicarb Sulfone	0.0020	U	ug/L	P346184	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P346184	
		Carbaryl	0.0020	U	ug/L	P346184	
		Carbofuran	0.0020	U	ug/L	P346184	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P346184	
		Methiocarb	0.0020	U	ug/L	P346184	
		Methomyl	0.0020	U	ug/L	P346184	
		Oxamyl	0.0020	U	ug/L	P346184	
		Propoxur	0.0020	U	ug/L	P346184	
1996361		2,4-D	0.029		ug/L	P346184	
		Bentazon	0.016		ug/L	P346184	MS
		MCP	0.0063	I	ug/L	P346184	
		Triclopyr**	0.0040	U	ug/L	P346184	
		Imidacloprid	0.038		ug/L	P346184	
		Diuron	0.0072	I	ug/L	P346184	
		Pyraclostrobin**	0.0020	U	ug/L	P346184	
		Primidone**	0.0040	U	ug/L	P346184	
		Linuron	0.0040	U	ug/L	P346184	
		Acetaminophen**	0.0080	U	ug/L	P346184	
		Fenuron	0.016	U	ug/L	P346184	
		Imazapyr**	0.98		ug/L	P346184	
		Carbamazepine**	6.1E-04	I	ug/L	P346184	
		Fluridone**	0.033		ug/L	P346184	
		Hydrocodone**	8.0E-04	U	ug/L	P346184	
		Sucralose**	0.14		ug/L	P346245	
		Glyphosate**	3.8		ug/L	P346245	
		AMPA**	0.80		ug/L	P346245	
		Endothal**	0.10	U	ug/L	P346245	
		Glufosinate**	0.10	U	ug/L	P346245	
1996367	EPA 8270D	Aldrin	4.1	UJ	ng/L	P346310	RPD
		Alpha-BHC	2.0	U	ng/L	P346310	
		Beta-BHC	4.1	U	ng/L	P346310	
		Delta-BHC	4.1	U	ng/L	P346310	
		Gamma-BHC	4.1	U	ng/L	P346310	
		Carbophenothion	4.1	U	ng/L	P346310	
		Chlorothalonil	2.0	U	ng/L	P346310	
		Cypermethrin	20	UJ	ng/L	P346310	LCS, RPD
		DDD-p,p'	3.1	U	ng/L	P346310	
		DDE-p,p'	3.1	U	ng/L	P346310	
		DDT-p,p'	3.1	U	ng/L	P346310	
		Dieldrin	4.1	U	ng/L	P346310	
		Endosulfan I	4.1	U	ng/L	P346310	
		Endosulfan II	4.1	U	ng/L	P346310	

Field ID: G1SW0066

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1996367	EPA 8270D	Endosulfan Sulfate	2.0	U	ng/L	P346310	
		Endrin	2.0	U	ng/L	P346310	
		Endrin Aldehyde	2.0	U	ng/L	P346310	
		Heptachlor	1.5	UJ	ng/L	P346310	LCS
		Heptachlor Epoxide	2.0	U	ng/L	P346310	
		Methoxychlor	4.1	U	ng/L	P346310	
		Mirex	2.0	UJ	ng/L	P346310	LCS
		Permethrin	10	UJ	ng/L	P346310	LCS
		Trifluralin	1.0	U	ng/L	P346310	
		Alpha-Chlordane	1.0	U	ng/L	P346310	
		Gamma-Chlordane	1.0	U	ng/L	P346310	
		Endrin Ketone	2.0	U	ng/L	P346310	
		Dicofol	31	U	ng/L	P346310	
		Chlordane**	2.5	U	ng/L	P346310	
		Toxaphene**	31	UJ	ng/L	P346310	CCV
1996369	EPA 8270D	Alachlor	0.24	U	ng/L	P346180	
		Ametryn	0.32	U	ng/L	P346180	
		Atrazine	110		ng/L	P346180	
		Atrazine Desethyl	19	J	ng/L	P346180	RPD
		Azinphos Methyl	2.2	U	ng/L	P346180	
		Bromacil	0.49	U	ng/L	P346180	
		Butylate	0.39	U	ng/L	P346180	RPD
		Chlorpyrifos Ethyl	0.24	U	ng/L	P346180	
		Chlorpyrifos Methyl	0.097	U	ng/L	P346180	
		Demeton	1.9	U	ng/L	P346180	
		Diazinon	0.12	U	ng/L	P346180	
		Disulfoton	0.49	U	ng/L	P346180	
		EPTC	1.2	U	ng/L	P346180	RPD
		Ethion	0.15	U	ng/L	P346180	RPD
		Ethoprop	0.097	U	ng/L	P346180	
		Fenamiphos	0.24	U	ng/L	P346180	
		Fipronil	0.90	I	ng/L	P346180	
		Fipronil Sulfide	0.69		ng/L	P346180	
		Fipronil Sulfone	1.3		ng/L	P346180	
		Hexazinone	2.4		ng/L	P346180	
		Malathion	0.34	U	ng/L	P346180	
		Metribuzin	0.19	UJ	ng/L	P346180	RPD
		Mevinphos	0.49	U	ng/L	P346180	
		Molinate	0.29	U	ng/L	P346180	
		Norflurazon	0.49	U	ng/L	P346180	
		Pendimethalin	0.97	U	ng/L	P346180	
		Phorate	0.24	U	ng/L	P346180	
		Prometon	0.87	U	ng/L	P346180	
		Prometryn	0.19	U	ng/L	P346180	
		Simazine	1.4	I	ng/L	P346180	

Field ID: G1SW0066

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1996369	EPA 8270D	Terbufos	0.097	U	ng/L	P346180	
		Terbutylazine	0.41	U	ng/L	P346180	
		Fonofos	0.19	U	ng/L	P346180	
		Metalaxyl	0.71	I	ng/L	P346180	
		Metolachlor	0.48	I	ng/L	P346180	
		Acetochlor	0.24	U	ng/L	P346180	
		Cyanazine	0.49	UJ	ng/L	P346180	RPD
		Parathion Ethyl	0.24	U	ng/L	P346180	
		Parathion Methyl	0.24	U	ng/L	P346180	

Ref. Method and Comment:

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

EPA 8276: Refer to the narrative for an explanation of QC Codes.

EPA 8270D: MS accuracy for Atrazine and Bromacil not assessed due to high content of these parameters in the sample spiked. Refer to the narrative for an explanation of QC Codes.

Sample Location: Thirtymile Creek @ Train Tracks Mosaic

Collection Date/Time: 05/30/2018 09:30

Field ID: G2SW0047

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1996362	EPA 8321B	2,4-D	0.14		ug/L	P346184	
		Bentazon	8.0E-04	U	ug/L	P346184	MS
		MCP	0.0020	U	ug/L	P346184	
		Triclopyr**	0.0040	U	ug/L	P346184	
		Imidacloprid	0.0031	I	ug/L	P346184	
		Diuron	0.0020	U	ug/L	P346184	
		Pyraclostrobin**	0.0020	U	ug/L	P346184	
		Primidone**	0.0040	U	ug/L	P346184	
		Linuron	0.0040	U	ug/L	P346184	
		Acetaminophen**	0.0080	U	ug/L	P346184	
		Fenuron	0.016	U	ug/L	P346184	
		Imazapyr**	0.045		ug/L	P346184	
		Carbamazepine**	4.0E-04	U	ug/L	P346184	
		Fluridone**	4.0E-04	U	ug/L	P346184	
		Hydrocodone**	8.0E-04	U	ug/L	P346184	
		Sucralose**	0.010	U	ug/L	P346245	
		Glyphosate**	0.29	I	ug/L	P346245	
		AMPA**	0.14	I	ug/L	P346245	
		Endothal**	0.10	U	ug/L	P346245	
		Glufosinate**	0.10	U	ug/L	P346245	

Sample Location: Thirtymile Creek @ Nichols Road

Collection Date/Time: 05/30/2018 09:50

Field ID: G2SW0046

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1996363	EPA 8321B	2,4-D	0.0078	I	ug/L	P346184	
		Bentazon	0.0019	I	ug/L	P346184	MS
		MCP	0.0020	U	ug/L	P346184	
		Triclopyr**	0.0040	U	ug/L	P346184	
		Imidacloprid	0.0052	I	ug/L	P346184	
		Diuron	0.0045	I	ug/L	P346184	
		Pyraclostrobin**	0.0020	U	ug/L	P346184	
		Primidone**	0.0058	I	ug/L	P346184	
		Linuron	0.0040	U	ug/L	P346184	
		Acetaminophen**	0.0080	U	ug/L	P346184	
		Fenuron	0.016	U	ug/L	P346184	
		Imazapyr**	0.23		ug/L	P346184	
		Carbamazepine**	0.0011	I	ug/L	P346184	
		Fluridone**	0.0036		ug/L	P346184	
		Hydrocodone**	8.0E-04	U	ug/L	P346184	
		Sucralose**	0.93		ug/L	P346245	
		Glyphosate**	0.12	I	ug/L	P346245	
		AMPA**	0.10	U	ug/L	P346245	
		Endothall**	0.10	U	ug/L	P346245	
		Glufosinate**	0.10	U	ug/L	P346245	

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P346210

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P346211

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P346311

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: P346311

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: P346344

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P346345

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P346691

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P346461

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P346268

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P346386

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P346191

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

Reference Method: EPA 8270D
Batch ID: P346180

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P346180

Component	Result	Code	Units
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
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8270D
Batch ID: P346310

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
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 8276
Batch ID: P346310

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P346184

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	4.0E-04	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	4.0E-04	U	ug/L
Hydrocodone	8.0E-04	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
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: EPA 8321B

Batch ID: P346245

Component	Result	Code	Units
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: SM 2120 B

Batch ID: P346197

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B

Batch ID: P346198

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97

Batch ID: P346303

Component	Result	Code	Units
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Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P346303

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

Reference Method: SM 2540 C-97
Batch ID: P346475

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P346476

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P346447

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P346448

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P346304

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P346584

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: P346311

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	107		P	85 - 115
Iron	103		P	85 - 115
Magnesium	108		P	85 - 115
Potassium	102		P	85 - 115
Sodium	102		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P346311

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	106		P	85 - 115
Cadmium	106		P	85 - 115
Chromium	99.9		P	85 - 115
Copper	100		P	85 - 115
Lead	101		P	85 - 115
Nickel	104		P	85 - 115
Silver	93.4		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P346344

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P346345

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P346691

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P346461

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	94.9		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P346268

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 365.1 Rev. 2.0

Batch ID: P346386

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P346191

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.9		P	90 - 110

Reference Method: EPA 8270D

Batch ID: P346180

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	102	104	P/P	74 - 119
Alachlor	94.1	100	P/P	75 - 118
Ametryn	92.1	106	P/P	59 - 137
Atrazine	103	97.9	P/P	73 - 120
Atrazine Desethyl	90.1	56.4	P/P	19 - 129
Azinphos Methyl	105	98.7	P/P	65 - 181
Bromacil	98.1	83.9	P/P	43 - 123
Butylate	63.2	67.6	P/P	28 - 85.0
Chlorpyrifos Ethyl	89.9	87.5	P/P	55 - 112
Chlorpyrifos Methyl	89.2	83.3	P/P	35 - 124
Cyanazine	165	93.5	P/P	26 - 262
Demeton	78.2	77.2	P/P	43 - 122
Diazinon	97.9	95.9	P/P	72 - 120
Disulfoton	87.7	81.0	P/P	45 - 137
EPTC	61.8	64.6	P/P	28 - 95.0
Ethion	87.0	93.0	P/P	63 - 127
Ethoprop	67.8	64.0	P/P	63 - 109
Fenamiphos	101	93.5	P/P	66 - 136
Fipronil	102	106	P/P	63 - 126
Fipronil Sulfide	93.3	93.9	P/P	59 - 123
Fipronil Sulfone	87.8	93.9	P/P	56 - 122
Fonofos	89.4	79.2	P/P	64 - 114
Hexazinone	95.4	94.9	P/P	49 - 144
Malathion	91.4	93.8	P/P	68 - 131
Metaxyl	104	91.7	P/P	57 - 126
Metolachlor	96.1	101	P/P	75 - 118
Metribuzin	139	95.2	P/P	46 - 169
Mevinphos	95.6	72.7	P/P	34 - 126
Molinate	69.5	68.9	P/P	37 - 101
Norflurazon	99.9	103	P/P	63 - 127
Parathion Ethyl	89.3	91.6	P/P	78 - 109
Parathion Methyl	99.5	89.8	P/P	74 - 123
Pendimethalin	112	110	P/P	51 - 130
Phorate	81.2	74.2	P/P	53 - 116
Prometon	96.5	98.6	P/P	66 - 124
Prometryn	96.7	103	P/P	66 - 124
Simazine	105	94.3	P/P	62 - 134
Terbufos	91.7	80.7	P/P	59 - 115
Terbutylazine	99.2	97.3	P/P	76 - 113

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P346310

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	36.5	25.9	P/P	24 - 89.0
Alpha-BHC	74.6	73.8	P/P	58 - 117
Alpha-Chlordane	71.7	63.5	P/P	56 - 115
Beta-BHC	103	107	P/P	55 - 137
Carbophenothion	66.6	57.5	P/P	37 - 145
Chlorothalonil	92.0	91.3	P/P	26 - 163
Cypermethrin	41.3	57.5	F/P	42 - 156
DDD-p,p'	97.3	97.4	P/P	59 - 129
DDE-p,p'	60.7	56.4	P/P	52 - 117
DDT-p,p'	56.6	69.7	P/P	48 - 128
Delta-BHC	108	107	P/P	59 - 158
Dicofol	82.0	91.1	P/P	19 - 124
Dieldrin	91.8	68.5	P/P	57 - 126
Endosulfan I	87.8	69.2	P/P	59 - 133
Endosulfan II	97.1	84.8	P/P	58 - 148
Endosulfan Sulfate	93.6	94.9	P/P	56 - 135
Endrin	86.7	79.5	P/P	50 - 140
Endrin Aldehyde	96.7	88.3	P/P	47 - 141
Endrin Ketone	93.9	90.1	P/P	63 - 123
Gamma-BHC	104	108	P/P	59 - 132
Gamma-Chlordane	61.4	56.6	P/P	55 - 112
Heptachlor	49.5	38.2	P/F	45 - 102
Heptachlor Epoxide	88.5	72.9	P/P	61 - 116
Methoxychlor	81.3	84.1	P/P	60 - 133
Mirex	24.0	28.0	F/F	40 - 98.0
Permethrin	40.9	48.6	F/P	45 - 131
Trifluralin	52.2	49.2	P/P	38 - 179

Reference Method: EPA 8276
Batch ID: P346310

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	101	105	P/P	47 - 125
Toxaphene	68.9	70.5	P/P	46 - 147

Reference Method: EPA 8321B
Batch ID: P346184

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	81.0		P	40 - 150
3-Hydroxycarbofuran	102		P	40 - 150
Acetaminophen	104		P	30 - 150
Aldicarb	104		P	30 - 150
Aldicarb Sulfone	110		P	40 - 150
Aldicarb Sulfoxide	85.1		P	40 - 150
Bentazon	74.7		P	30 - 150
Carbamazepine	72.5		P	40 - 150
Carbaryl	95.4		P	40 - 150
Carbofuran	107		P	40 - 150
Diuron	62.7		P	40 - 150
Fenuron	105		P	40 - 150
Fluridone	75.6		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P346184

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Hydrocodone	96.3		P	40 - 150
Imazapyr	89.2		P	40 - 150
Imidacloprid	109		P	40 - 160
Linuron	72.7		P	40 - 150
MCPP	86.8		P	40 - 150
Methiocarb	78.3		P	40 - 150
Methomyl	92.0		P	40 - 150
Oxamyl	111		P	40 - 150
Primidone	96.7		P	40 - 150
Propoxur	93.8		P	40 - 150
Pyraclostrobin	69.3		P	40 - 150
Triclopyr	78.4		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P346245

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
AMPA	103		P	40 - 140
Endothall	91.8		P	40 - 140
Glufosinate	105		P	40 - 140
Glyphosate	119		P	40 - 140
Sucralose	116		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P346303

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P346304

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.7		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P346584

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.1		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P346311

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996019	Calcium	103		P	80 - 120
1996019	Iron	106		P	80 - 120
1996019	Magnesium	103		P	80 - 120
1996019	Potassium	105		P	80 - 120
1996019	Sodium	107		P	80 - 120
1996019	Zinc	103		P	80 - 120
1996406	Calcium	105	107	P/P	80 - 120
1996406	Iron	103	104	P/P	80 - 120
1996406	Magnesium	106	108	P/P	80 - 120
1996406	Potassium	102	104	P/P	80 - 120
1996406	Sodium	101		P	80 - 120
1996406	Zinc	102	103	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P346311

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996019	Arsenic	106		P	80 - 120
1996019	Cadmium	104		P	80 - 120
1996019	Chromium	101		P	80 - 120
1996019	Copper	98.0		P	80 - 120
1996019	Lead	101		P	80 - 120
1996019	Nickel	102		P	80 - 120
1996019	Silver	93.3		P	80 - 120
1996406	Arsenic	104	103	P/P	80 - 120
1996406	Cadmium	104	105	P/P	80 - 120
1996406	Chromium	102	101	P/P	80 - 120
1996406	Copper	101	98.9	P/P	80 - 120
1996406	Lead	102	102	P/P	80 - 120
1996406	Nickel	103	102	P/P	80 - 120
1996406	Silver	93.4	93.0	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P346344

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996333	Chloride	105		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P346345

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996189	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P346691

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996298	Ammonia-N	97.2	96.9	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P346461

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996301	Kjeldahl Nitrogen	106	98.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P346268

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996301	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P346386

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996301	Total-P	100	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P346191

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996302	O-Phosphate-P	96.3	97.0	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P346180

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996365	Acetochlor	108	92.1	P/P	67 - 125
1996365	Alachlor	99.2	87.8	P/P	69 - 123
1996365	Ametryn	111	96.3	P/P	52 - 151
1996365	Atrazine Desethyl	80.2	86.7	P/P	10 - 129
1996365	Azinphos Methyl	96.5	99.1	P/P	48 - 200
1996365	Butylate	34.0	50.4	P/P	10 - 85.0
1996365	Chlorpyrifos Ethyl	90.1	78.7	P/P	54 - 115
1996365	Chlorpyrifos Methyl	91.1	85.1	P/P	44 - 117
1996365	Cyanazine	167	182	P/P	10 - 262
1996365	Demeton	68.9	88.1	P/P	24 - 145
1996365	Diazinon	108	101	P/P	66 - 129
1996365	Disulfoton	92.3	98.1	P/P	45 - 139
1996365	EPTC	31.3	50.1	P/P	10 - 86.0
1996365	Ethion	90.4	64.9	P/P	59 - 133
1996365	Ethoprop	82.7	77.8	P/P	54 - 116
1996365	Fenamiphos	91.7	79.6	P/P	55 - 140
1996365	Fipronil	112	86.1	P/P	37 - 142
1996365	Fipronil Sulfide	110	77.1	P/P	37 - 130
1996365	Fipronil Sulfone	93.8	66.8	P/P	18 - 143
1996365	Fonofos	91.9	96.3	P/P	55 - 118
1996365	Hexazinone	103	91.1	P/P	62 - 140
1996365	Malathion	86.4	76.0	P/P	64 - 132
1996365	Metalaxyl	99.1	86.0	P/P	55 - 129
1996365	Metolachlor	97.5	87.9	P/P	56 - 137
1996365	Metribuzin	170	169	P/P	16 - 218
1996365	Mevinphos	82.1	94.1	P/P	34 - 129
1996365	Molinate	47.6	55.8	P/P	16 - 99.0
1996365	Norflurazon	102	82.6	P/P	43 - 135

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P346180

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996365	Parathion Ethyl	97.5	87.0	P/P	71 - 112
1996365	Parathion Methyl	105	97.2	P/P	65 - 127
1996365	Pendimethalin	125	111	P/P	35 - 159
1996365	Phorate	77.7	101	P/P	41 - 129
1996365	Prometon	114	102	P/P	56 - 140
1996365	Prometryn	87.1	76.4	P/P	65 - 130
1996365	Simazine	106	82.5	P/P	54 - 148
1996365	Terbufos	95.2	101	P/P	53 - 126
1996365	Terbutylazine	104	90.1	P/P	73 - 114

Reference Method: EPA 8270D
Batch ID: P346310

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996317	Aldrin	50.2	42.3	P/P	26 - 96.0
1996317	Alpha-BHC	83.7	88.0	P/P	51 - 123
1996317	Alpha-Chlordane	75.7	65.0	P/P	45 - 120
1996317	Beta-BHC	85.5	96.6	P/P	43 - 146
1996317	Carbophenothion	75.4	67.7	P/P	26 - 179
1996317	Chlorothalonil	32.5	27.1	P/P	10 - 215
1996317	Cypermethrin	64.1	58.5	P/P	35 - 169
1996317	DDD-p,p'	90.9	87.2	P/P	49 - 131
1996317	DDE-p,p'	64.3	55.0	P/P	39 - 127
1996317	DDT-p,p'	63.3	65.0	P/P	49 - 120
1996317	Delta-BHC	97.0	107	P/P	49 - 187
1996317	Dicofol	93.3	85.4	P/P	10 - 129
1996317	Dieldrin	84.5	71.7	P/P	46 - 132
1996317	Endosulfan I	92.9	72.4	P/P	57 - 130
1996317	Endosulfan II	94.1	80.9	P/P	52 - 148
1996317	Endosulfan Sulfate	76.7	78.6	P/P	55 - 129
1996317	Endrin	96.4	76.4	P/P	45 - 133
1996317	Endrin Aldehyde	75.2	60.3	P/P	26 - 140
1996317	Endrin Ketone	79.0	83.9	P/P	60 - 125
1996317	Gamma-BHC	128	107	P/P	50 - 145
1996317	Gamma-Chlordane	69.1	59.6	P/P	44 - 118
1996317	Heptachlor	60.4	52.1	P/P	35 - 106
1996317	Heptachlor Epoxide	85.5	73.2	P/P	52 - 123
1996317	Methoxychlor	78.6	79.3	P/P	54 - 132
1996317	Mirex	44.4	45.1	P/P	36 - 107
1996317	Permethrin	61.4	60.9	P/P	47 - 135
1996317	Trifluralin	60.1	61.3	P/P	32 - 228

Reference Method: EPA 8276
Batch ID: P346310

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996364	Chlordane	79.2	83.5	P/P	41 - 134
1996364	Toxaphene	57.7	53.9	P/P	39 - 158

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P346184

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996357	2,4-D	66.2	43.6	P/P	40 - 150
1996357	3-Hydroxycarbofuran	83.5	73.8	P/P	40 - 150
1996357	Acetaminophen	128	98.4	P/P	30 - 150
1996357	Aldicarb	61.4	52.2	P/P	30 - 150
1996357	Aldicarb Sulfone	97.6	88.0	P/P	40 - 150
1996357	Aldicarb Sulfoxide	64.8	71.3	P/P	40 - 150
1996357	Bentazon	11.1	3.35	F/F	30 - 150
1996357	Carbamazepine	59.6	57.9	P/P	40 - 150
1996357	Carbaryl	44.3	40.6	P/P	40 - 150
1996357	Carbofuran	52.7	46.1	P/P	40 - 150
1996357	Diuron	45.7	41.0	P/P	40 - 150
1996357	Fenuron	70.7	55.9	P/P	40 - 150
1996357	Fluridone	61.9	56.1	P/P	40 - 150
1996357	Hydrocodone	79.6	76.6	P/P	40 - 150
1996357	Imazapyr	104	99.3	P/P	40 - 150
1996357	Imidacloprid	119	134	P/P	40 - 160
1996357	Linuron	60.5	51.1	P/P	40 - 150
1996357	MCPP	89.8	85.3	P/P	40 - 150
1996357	Methiocarb	67.9	59.5	P/P	40 - 150
1996357	Methomyl	74.9	67.0	P/P	40 - 150
1996357	Oxamyl	82.1	81.6	P/P	40 - 150
1996357	Primidone	93.0	78.9	P/P	40 - 150
1996357	Propoxur	48.6	40.1	P/P	40 - 150
1996357	Pyraclostrobin	81.3	70.8	P/P	40 - 150
1996357	Triclopyr	104	103	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P346245

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996311	AMPA	61.2	55.1	P/P	40 - 140
1996311	Endothall	122	121	P/P	40 - 140
1996311	Glufosinate	96.2	95.3	P/P	40 - 140
1996311	Glyphosate	115	105	P/P	40 - 140
1996311	Sucralose	123	116	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P346304

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996248	Fluoride	95.6	96.1	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P346584

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996054	Organic Carbon	97.9	97.7	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P346210

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996242	Turbidity	5.94	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P346211

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996336	Turbidity	2.92	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P346311

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996406	Calcium	1.72	Spike	P	0 - 20
1996406	Iron	0.949	Spike	P	0 - 20
1996406	Magnesium	0.931	Spike	P	0 - 20
1996406	Potassium	1.52	Spike	P	0 - 20
1996406	Sodium	1.13	Spike	P	0 - 20
1996406	Zinc	0.921	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P346311

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996406	Arsenic	0.953	Spike	P	0 - 20
1996406	Cadmium	0.878	Spike	P	0 - 20
1996406	Chromium	1.53	Spike	P	0 - 20
1996406	Copper	1.76	Spike	P	0 - 20
1996406	Lead	0.526	Spike	P	0 - 20
1996406	Nickel	0.357	Spike	P	0 - 20
1996406	Silver	0.478	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P346344

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996189	Chloride	0.228	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P346345

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996189	Sulfate	0.222	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P346691

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996298	Ammonia-N	0.142	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P346461

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996301	Kjeldahl Nitrogen	5.01	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P346268

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996301	NO2NO3-N	0.295	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P346386

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996301	Total-P	2.26	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P346191

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996302	O-Phosphate-P	0.606	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P346180

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996365	Acetochlor	16.0	Spike	P	0 - 30
1996365	Alachlor	12.1	Spike	P	0 - 30
1996365	Ametryn	14.3	Spike	P	0 - 30
1996365	Atrazine	6.91	Spike	P	0 - 30
1996365	Atrazine Desethyl	5.23	Spike	P	0 - 30
1996365	Azinphos Methyl	2.66	Spike	P	0 - 30
1996365	Bromacil	14.4	Spike	P	0 - 30
1996365	Butylate	38.9	Spike	F	0 - 30
1996365	Chlorpyrifos Ethyl	13.5	Spike	P	0 - 30
1996365	Chlorpyrifos Methyl	6.86	Spike	P	0 - 30
1996365	Cyanazine	8.36	Spike	P	0 - 30
1996365	Demeton	24.5	Spike	P	0 - 30
1996365	Diazinon	6.20	Spike	P	0 - 30
1996365	Disulfoton	6.02	Spike	P	0 - 30
1996365	EPTC	46.1	Spike	F	0 - 30
1996365	Ethion	32.8	Spike	F	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P346180

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996365	Ethoprop	6.09	Spike	P	0 - 30
1996365	Fenamiphos	14.0	Spike	P	0 - 30
1996365	Fipronil	19.6	Spike	P	0 - 30
1996365	Fipronil Sulfide	28.7	Spike	P	0 - 30
1996365	Fipronil Sulfone	22.9	Spike	P	0 - 30
1996365	Fonofos	4.68	Spike	P	0 - 30
1996365	Hexazinone	6.47	Spike	P	0 - 30
1996365	Malathion	10.5	Spike	P	0 - 30
1996365	Metalaxyl	10.3	Spike	P	0 - 30
1996365	Metolachlor	8.27	Spike	P	0 - 30
1996365	Metribuzin	0.839	Spike	P	0 - 30
1996365	Mevinphos	13.6	Spike	P	0 - 30
1996365	Molinate	16.0	Spike	P	0 - 30
1996365	Norflurazon	13.7	Spike	P	0 - 30
1996365	Parathion Ethyl	11.3	Spike	P	0 - 30
1996365	Parathion Methyl	7.87	Spike	P	0 - 30
1996365	Pendimethalin	11.9	Spike	P	0 - 30
1996365	Phorate	25.8	Spike	P	0 - 30
1996365	Prometon	11.0	Spike	P	0 - 30
1996365	Prometryn	13.1	Spike	P	0 - 30
1996365	Simazine	14.6	Spike	P	0 - 30
1996365	Terbufos	6.29	Spike	P	0 - 30
1996365	Terbuthylazine	14.1	Spike	P	0 - 30
LFB	Acetochlor	2.12	LCS	P	0 - 30
LFB	Alachlor	6.42	LCS	P	0 - 30
LFB	Ametryn	13.9	LCS	P	0 - 30
LFB	Atrazine	4.70	LCS	P	0 - 30
LFB	Atrazine Desethyl	46.0	LCS	F	0 - 30
LFB	Azinphos Methyl	6.03	LCS	P	0 - 30
LFB	Bromacil	15.6	LCS	P	0 - 30
LFB	Butylate	6.78	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	2.65	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	6.90	LCS	P	0 - 30
LFB	Cyanazine	55.2	LCS	F	0 - 30
LFB	Demeton	1.38	LCS	P	0 - 30
LFB	Diazinon	2.05	LCS	P	0 - 30
LFB	Disulfoton	7.89	LCS	P	0 - 30
LFB	EPTC	4.47	LCS	P	0 - 30
LFB	Ethion	6.66	LCS	P	0 - 30
LFB	Ethoprop	5.87	LCS	P	0 - 30
LFB	Fenamiphos	7.52	LCS	P	0 - 30
LFB	Fipronil	3.47	LCS	P	0 - 30
LFB	Fipronil Sulfide	0.582	LCS	P	0 - 30
LFB	Fipronil Sulfone	6.67	LCS	P	0 - 30
LFB	Fonofos	12.1	LCS	P	0 - 30
LFB	Hexazinone	0.541	LCS	P	0 - 30
LFB	Malathion	2.52	LCS	P	0 - 30
LFB	Metalaxyl	12.6	LCS	P	0 - 30
LFB	Metolachlor	4.99	LCS	P	0 - 30
LFB	Metribuzin	37.1	LCS	F	0 - 30
LFB	Mevinphos	27.2	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P346180

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Molinate	0.856	LCS	P	0 - 30
LFB	Norflurazon	2.65	LCS	P	0 - 30
LFB	Parathion Ethyl	2.62	LCS	P	0 - 30
LFB	Parathion Methyl	10.2	LCS	P	0 - 30
LFB	Pendimethalin	2.23	LCS	P	0 - 30
LFB	Phorate	9.06	LCS	P	0 - 30
LFB	Prometon	2.16	LCS	P	0 - 30
LFB	Prometryn	5.89	LCS	P	0 - 30
LFB	Simazine	10.5	LCS	P	0 - 30
LFB	Terbufos	12.8	LCS	P	0 - 30
LFB	Terbuthylazine	1.90	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P346310

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996317	Aldrin	17.2	Spike	P	0 - 30
1996317	Alpha-BHC	5.04	Spike	P	0 - 30
1996317	Alpha-Chlordane	15.2	Spike	P	0 - 30
1996317	Beta-BHC	12.3	Spike	P	0 - 30
1996317	Carbophenothion	10.8	Spike	P	0 - 30
1996317	Chlorothalonil	18.1	Spike	P	0 - 30
1996317	Cypermethrin	9.01	Spike	P	0 - 30
1996317	DDD-p,p'	4.13	Spike	P	0 - 30
1996317	DDE-p,p'	15.5	Spike	P	0 - 30
1996317	DDT-p,p'	2.73	Spike	P	0 - 30
1996317	Delta-BHC	9.45	Spike	P	0 - 30
1996317	Dicofol	8.85	Spike	P	0 - 30
1996317	Dieldrin	16.3	Spike	P	0 - 30
1996317	Endosulfan I	24.8	Spike	P	0 - 30
1996317	Endosulfan II	15.1	Spike	P	0 - 30
1996317	Endosulfan Sulfate	2.43	Spike	P	0 - 30
1996317	Endrin	23.2	Spike	P	0 - 30
1996317	Endrin Aldehyde	22.0	Spike	P	0 - 30
1996317	Endrin Ketone	5.94	Spike	P	0 - 30
1996317	Gamma-BHC	17.3	Spike	P	0 - 30
1996317	Gamma-Chlordane	14.8	Spike	P	0 - 30
1996317	Heptachlor	14.7	Spike	P	0 - 30
1996317	Heptachlor Epoxide	15.5	Spike	P	0 - 30
1996317	Methoxychlor	0.882	Spike	P	0 - 30
1996317	Mirex	1.48	Spike	P	0 - 30
1996317	Permethrin	0.835	Spike	P	0 - 30
1996317	Trifluralin	1.94	Spike	P	0 - 30
LFB	Aldrin	34.2	LCS	F	0 - 30
LFB	Alpha-BHC	1.17	LCS	P	0 - 30
LFB	Alpha-Chlordane	12.1	LCS	P	0 - 30
LFB	Beta-BHC	3.75	LCS	P	0 - 30
LFB	Carbophenothion	14.8	LCS	P	0 - 30
LFB	Chlorothalonil	0.822	LCS	P	0 - 30
LFB	Cypermethrin	32.8	LCS	F	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P346310

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	DDD-p,p'	0.0603	LCS	P	0 - 30
LFB	DDE-p,p'	7.34	LCS	P	0 - 30
LFB	DDT-p,p'	20.7	LCS	P	0 - 30
LFB	Delta-BHC	0.690	LCS	P	0 - 30
LFB	Dicofol	10.4	LCS	P	0 - 30
LFB	Dieldrin	29.1	LCS	P	0 - 30
LFB	Endosulfan I	23.7	LCS	P	0 - 30
LFB	Endosulfan II	13.5	LCS	P	0 - 30
LFB	Endosulfan Sulfate	1.39	LCS	P	0 - 30
LFB	Endrin	8.63	LCS	P	0 - 30
LFB	Endrin Aldehyde	9.12	LCS	P	0 - 30
LFB	Endrin Ketone	4.13	LCS	P	0 - 30
LFB	Gamma-BHC	3.54	LCS	P	0 - 30
LFB	Gamma-Chlordane	8.07	LCS	P	0 - 30
LFB	Heptachlor	25.8	LCS	P	0 - 30
LFB	Heptachlor Epoxide	19.3	LCS	P	0 - 30
LFB	Methoxychlor	3.45	LCS	P	0 - 30
LFB	Mirex	15.7	LCS	P	0 - 30
LFB	Permethrin	17.1	LCS	P	0 - 30
LFB	Trifluralin	5.91	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P346310

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996364	Chlordane	4.88	Spike	P	0 - 30
1996364	Toxaphene	6.84	Spike	P	0 - 30
LFB	Chlordane	4.38	LCS	P	0 - 30
LFB	Toxaphene	2.30	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P346184

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996357	2,4-D	10.9	Spike	P	0 - 30
1996357	3-Hydroxycarbofuran	12.4	Spike	P	0 - 30
1996357	Acetaminophen	26.2	Spike	P	0 - 30
1996357	Aldicarb	16.2	Spike	P	0 - 30
1996357	Aldicarb Sulfone	10.3	Spike	P	0 - 30
1996357	Aldicarb Sulfoxide	9.46	Spike	P	0 - 30
1996357	Bentazon	20.9	Spike	P	0 - 30
1996357	Carbamazepine	2.85	Spike	P	0 - 30
1996357	Carbaryl	8.56	Spike	P	0 - 30
1996357	Carbofuran	13.3	Spike	P	0 - 30
1996357	Diuron	7.58	Spike	P	0 - 30
1996357	Fenuron	23.5	Spike	P	0 - 30
1996357	Fluridone	8.68	Spike	P	0 - 30
1996357	Hydrocodone	3.88	Spike	P	0 - 30
1996357	Imazapyr	2.21	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P346184

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996357	Imidacloprid	7.73	Spike	P	0 - 30
1996357	Linuron	16.8	Spike	P	0 - 30
1996357	MCP	5.07	Spike	P	0 - 30
1996357	Methiocarb	13.3	Spike	P	0 - 30
1996357	Methomyl	11.1	Spike	P	0 - 30
1996357	Oxamyl	0.609	Spike	P	0 - 30
1996357	Primidone	15.4	Spike	P	0 - 30
1996357	Propoxur	19.1	Spike	P	0 - 30
1996357	Pyraclostrobin	13.7	Spike	P	0 - 30
1996357	Triclopyr	0.503	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P346245

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996311	AMPA	5.49	Spike	P	0 - 30
1996311	Endothall	1.43	Spike	P	0 - 30
1996311	Glufosinate	0.871	Spike	P	0 - 30
1996311	Glyphosate	4.07	Spike	P	0 - 30
1996311	Sucralose	5.54	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P346197

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996248	Color (true)	0.474	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P346198

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996337	Color (true)	1.40	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P346303

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996248	Total Alkalinity	0.972	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P346475

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996252	TDS	2.46	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 2540 C-97
Batch ID: P346476

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996337	TDS	3.70	Sample	P	0 - 10

Reference Method: SM 2540 D-97
Batch ID: P346448

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996337	TSS	4.26	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P346304

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996248	Fluoride	0.516	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P346584

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996054	Organic Carbon	0.171	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: 1996356
Field Sample ID: G2SW0045

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	46.1	P	30 - 160

Lab Sample ID: 1996357
Field Sample ID: G2SW0045

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	127	P	30 - 160
EPA 8321B	Acetaminophen-d4	112	P	30 - 160
EPA 8321B	Carbamazepine-d10	55.4	P	30 - 160
EPA 8321B	Diuron-d6	37.8	P	30 - 160
EPA 8321B	Endothall-d6	77.4	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	48.3	P	40 - 160
EPA 8321B	Primidone-d5	83.8	P	30 - 160
EPA 8321B	Sucralose-d6	127	P	40 - 160

Lab Sample ID: 1996358
Field Sample ID: G1SW0046

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	58.8	P	30 - 160

Lab Sample ID: 1996359
Field Sample ID: G1SW0066

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	54.7	P	30 - 160

Lab Sample ID: 1996360
Field Sample ID: G1SW0046

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	113	P	30 - 160
EPA 8321B	Acetaminophen-d4	99.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	57.5	P	30 - 160
EPA 8321B	Diuron-d6	41.5	P	30 - 160
EPA 8321B	Endothall-d6	93.3	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	68.2	P	40 - 160
EPA 8321B	Primidone-d5	89.1	P	30 - 160
EPA 8321B	Sucralose-d6	139	P	40 - 160

Lab Sample ID: 1996361
Field Sample ID: G1SW0066

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	96.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	112	P	30 - 160
EPA 8321B	Carbamazepine-d10	77.9	P	30 - 160
EPA 8321B	Diuron-d6	53.9	P	30 - 160
EPA 8321B	Endothall-d6	75.7	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	69.7	P	40 - 160
EPA 8321B	Primidone-d5	99.5	P	30 - 160
EPA 8321B	Sucralose-d6	123	P	40 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1996362
Field Sample ID: G2SW0047

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	90.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	139	P	30 - 160
EPA 8321B	Carbamazepine-d10	70.1	P	30 - 160
EPA 8321B	Diuron-d6	55.9	P	30 - 160
EPA 8321B	Endothall-d6	89.1	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	94.8	P	40 - 160
EPA 8321B	Primidone-d5	94.3	P	30 - 160
EPA 8321B	Sucralose-d6	131	P	40 - 160

Lab Sample ID: 1996363
Field Sample ID: G2SW0046

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	98.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	127	P	30 - 160
EPA 8321B	Carbamazepine-d10	60.8	P	30 - 160
EPA 8321B	Diuron-d6	58.1	P	30 - 160
EPA 8321B	Endothall-d6	73.3	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	42.5	P	40 - 160
EPA 8321B	Primidone-d5	86.7	P	30 - 160
EPA 8321B	Sucralose-d6	106	P	40 - 160

Lab Sample ID: 1996364
Field Sample ID: G2SW0045

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	67.6	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	52.4	P	34 - 101
EPA 8276	Decachlorobiphenyl	57.1	P	31 - 108
EPA 8276	PCNB	78.7	P	62 - 142

Lab Sample ID: 1996365
Field Sample ID: G2SW0045

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	102	P	71 - 126
EPA 8270D	Terbufos-d10	95.9	P	59 - 149

Lab Sample ID: 1996366
Field Sample ID: G1SW0046

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	58.9	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	39.7	P	34 - 101
EPA 8276	Decachlorobiphenyl	53.7	P	31 - 108
EPA 8276	PCNB	74.7	P	62 - 142

Lab Sample ID: 1996367
Field Sample ID: G1SW0066

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	60.7	P	37 - 117

Quality Assurance Report Surrogates

Lab Sample ID: 1996367
Field Sample ID: G1SW0066

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Tetrachloro-m-xylene	46.0	P	34 - 101
EPA 8276	Decachlorobiphenyl	54.7	P	31 - 108
EPA 8276	PCNB	84.3	P	62 - 142

Lab Sample ID: 1996368
Field Sample ID: G1SW0046

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	100	P	71 - 126
EPA 8270D	Terbufos-d10	106	P	59 - 149

Lab Sample ID: 1996369
Field Sample ID: G1SW0066

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	93.4	P	71 - 126
EPA 8270D	Terbufos-d10	109	P	59 - 149

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A84269

Included Lab Sample IDs: 1996333, 1996336, 1996337

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	101	P/P	90 - 115
Color (true)	101	101	P/P	90 - 115
Color (true)	98.7	100	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A84274

Included Lab Sample IDs: 1996335, 1996340, 1996341

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.2	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A84275

Included Lab Sample IDs: 1996333, 1996336, 1996337

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

Reference Method: EPA 8321B

Run ID: A84278

Included Lab Sample IDs: 1996357, 1996360, 1996361, 1996362, 1996363

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	91.0	103	P/P	50 - 150
2,4-D	99.2	97.0	P/P	50 - 150
Bentazon	104	120	P/P	50 - 150
Bentazon	90.6	117	P/P	50 - 150
MCP	95.7	89.3	P/P	50 - 150
MCP	98.7	92.7	P/P	50 - 150
Triclopyr	85.5	95.1	P/P	50 - 160
Triclopyr	87.6	95.6	P/P	50 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A84302

Included Lab Sample IDs: 1996334, 1996338, 1996339

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO ₂ NO ₃ -N	102	102	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A84316

Included Lab Sample IDs: 1996333, 1996336, 1996337

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

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A84316

Included Lab Sample IDs: 1996333, 1996336, 1996337

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.6	98.1	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A84339

Included Lab Sample IDs: 1996333, 1996336, 1996337

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	102	P/P	90 - 110
Chloride	102	102	P/P	90 - 110
Sulfate	102	101	P/P	90 - 110
Sulfate	99.9	102	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A84368

Included Lab Sample IDs: 1996370, 1996371, 1996372

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	103	101	P/P	90 - 110
Iron	101	99.5	P/P	90 - 110
Magnesium	104	101	P/P	90 - 110
Potassium	102	100	P/P	90 - 110
Sodium	103	100	P/P	90 - 110
Zinc	101	99.9	P/P	90 - 110

Reference Method: EPA 8270D

Run ID: A84391

Included Lab Sample IDs: 1996364, 1996366, 1996367

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	89.2		P	80 - 120
Alpha-BHC	98.4		P	80 - 120
Alpha-Chlordane	95.3		P	80 - 120
Beta-BHC	101		P	80 - 120
Carbophenothion	84.3		P	80 - 120
Chlorothalonil	90.4		P	80 - 120
Cypermethrin	92.7		P	80 - 120
DDD-p,p'	109		P	80 - 120
DDE-p,p'	96.2		P	80 - 120
DDT-p,p'	107		P	80 - 120
Delta-BHC	102		P	80 - 120
Dicofol	118		P	80 - 120
Dieldrin	97.4		P	80 - 120
Endosulfan I	88.5		P	80 - 120
Endosulfan II	84.8		P	80 - 120
Endosulfan Sulfate	101		P	80 - 120
Endrin	91.6		P	80 - 120
Endrin Aldehyde	90.6		P	80 - 120
Endrin Ketone	100		P	80 - 120
Gamma-BHC	104		P	80 - 120
Gamma-Chlordane	93.7		P	80 - 120
Heptachlor	93.0		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A84391

Included Lab Sample IDs: 1996364, 1996366, 1996367

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Heptachlor Epoxide	93.7		P	80 - 120
Methoxychlor	104		P	80 - 120
Mirex	95.5		P	80 - 120
Permethrin	94.9		P	80 - 120
Trifluralin	98.0		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A84399

Included Lab Sample IDs: 1996370, 1996371, 1996372

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	101	105	P/P	90 - 110
Arsenic	104	101	P/P	90 - 110
Cadmium	102	105	P/P	90 - 110
Cadmium	103	102	P/P	90 - 110
Chromium	100	104	P/P	90 - 110
Chromium	101	100	P/P	90 - 110
Copper	101	104	P/P	90 - 110
Copper	102	101	P/P	90 - 110
Lead	100	103	P/P	90 - 110
Lead	101	100	P/P	90 - 110
Silver	102	105	P/P	90 - 110
Silver	103	102	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A84402

Included Lab Sample IDs: 1996357, 1996360, 1996361, 1996362, 1996363

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	105	109	P/P	60 - 150
AMPA	109	109	P/P	60 - 150
Endothall	114	128	P/P	60 - 150
Endothall	127	114	P/P	60 - 150
Glufosinate	103	98.8	P/P	60 - 150
Glufosinate	98.8	95.4	P/P	60 - 150
Glyphosate	100	109	P/P	60 - 150
Glyphosate	109	108	P/P	60 - 150
Sucralose	112	93.5	P/P	60 - 150
Sucralose	112	112	P/P	60 - 150

Reference Method: EPA 8321B

Run ID: A84432

Included Lab Sample IDs: 1996356, 1996358, 1996359

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	115	112	P/P	50 - 150
Acetaminophen	139	149	P/P	60 - 150
Aldicarb	110	115	P/P	60 - 150
Aldicarb Sulfone	116	117	P/P	50 - 150
Aldicarb Sulfoxide	113	113	P/P	50 - 150
Carbamazepine	105	103	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A84432

Included Lab Sample IDs: 1996356, 1996358, 1996359

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Carbaryl	148	96.1	P/P	60 - 150
Carbofuran	135	97.2	P/P	50 - 150
Diuron	91.8	97.4	P/P	60 - 150
Fenuron	106	109	P/P	60 - 150
Fluridone	116	120	P/P	60 - 160
Hydrocodone	109	113	P/P	60 - 150
Imazapyr	98.6	88.4	P/P	50 - 150
Imidacloprid	107	114	P/P	60 - 150
Linuron	115	114	P/P	60 - 150
Methiocarb	114	104	P/P	50 - 150
Methomyl	109	117	P/P	50 - 150
Oxamyl	120	119	P/P	50 - 150
Primidone	102	111	P/P	60 - 150
Propoxur	128	98.4	P/P	50 - 150
Pyraclostrobin	97.7	105	P/P	60 - 150

Reference Method: SM 5310 B-00

Run ID: A84443

Included Lab Sample IDs: 1996334, 1996338, 1996339

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.0	97.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A84445

Included Lab Sample IDs: 1996334, 1996338, 1996339

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

Reference Method: EPA 8321B

Run ID: A84454

Included Lab Sample IDs: 1996357, 1996360, 1996361

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	71.9	66.1	P/P	60 - 150
Acetaminophen	72.7	71.9	P/P	60 - 150
Carbamazepine	91.2	100	P/P	60 - 150
Carbamazepine	95.0	91.2	P/P	60 - 150
Diuron	84.3	85.9	P/P	60 - 150
Diuron	85.9	91.4	P/P	60 - 150
Fenuron	101	99.4	P/P	60 - 150
Fenuron	99.4	95.6	P/P	60 - 150
Fluridone	96.3	96.8	P/P	60 - 160
Fluridone	96.8	96.8	P/P	60 - 160
Hydrocodone	101	96.7	P/P	60 - 150
Hydrocodone	105	101	P/P	60 - 150
Imazapyr	84.8	97.3	P/P	50 - 150
Imazapyr	97.3	89.8	P/P	50 - 150
Imidacloprid	95.1	93.8	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A84454

Included Lab Sample IDs: 1996357, 1996360, 1996361

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Imidacloprid	99.2	95.1	P/P	60 - 150
Linuron	88.4	97.5	P/P	60 - 150
Linuron	91.6	88.4	P/P	60 - 150
Primidone	103	103	P/P	60 - 150
Primidone	103	102	P/P	60 - 150
Pyraclostrobin	82.6	90.6	P/P	60 - 150
Pyraclostrobin	87.3	82.6	P/P	60 - 150

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A84470

Included Lab Sample IDs: 1996370, 1996371, 1996372

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Nickel	93.0	92.7	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A84494

Included Lab Sample IDs: 1996334, 1996338, 1996339

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	99.3	P/P	90 - 110
Ammonia-N	99.3	100	P/P	90 - 110

Reference Method: EPA 8270D

Run ID: A84506

Included Lab Sample IDs: 1996365, 1996368, 1996369

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	104		P	80 - 120
Alachlor	104		P	80 - 120
Ametryn	102		P	80 - 120
Atrazine	96.8		P	80 - 120
Atrazine Desethyl	85.5		P	80 - 120
Azinphos Methyl	97.6		P	80 - 120
Bromacil	95.1		P	80 - 120
Butylate	102		P	80 - 120
Chlorpyrifos Ethyl	97.5		P	80 - 120
Chlorpyrifos Methyl	98.0		P	80 - 120
Cyanazine	85.1		P	80 - 120
Demeton	102		P	80 - 120
Diazinon	100		P	80 - 120
Disulfoton	96.6		P	80 - 120
EPTC	101		P	80 - 120
Ethion	96.7		P	80 - 120
Ethoprop	100		P	80 - 120
Fenamiphos	95.8		P	80 - 120
Fipronil	100		P	80 - 120
Fipronil Sulfide	96.0		P	80 - 120
Fipronil Sulfone	94.7		P	80 - 120
Fonofos	97.7		P	80 - 120
Hexazinone	97.0		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A84506

Included Lab Sample IDs: 1996365, 1996368, 1996369

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Malathion	96.0		P	80 - 120
Metalaxyl	102		P	80 - 120
Metolachlor	108		P	80 - 120
Metribuzin	87.5		P	80 - 120
Mevinphos	98.3		P	80 - 120
Molinate	101		P	80 - 120
Norflurazon	97.9		P	80 - 120
Parathion Ethyl	89.5		P	80 - 120
Parathion Methyl	94.9		P	80 - 120
Pendimethalin	99.4		P	80 - 120
Phorate	95.9		P	80 - 120
Prometon	101		P	80 - 120
Prometryn	97.2		P	80 - 120
Simazine	97.7		P	80 - 120
Terbufos	96.0		P	80 - 120
Terbutylazine	98.2		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A84507

Included Lab Sample IDs: 1996334, 1996338, 1996339

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.2	101	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A84510

Included Lab Sample IDs: 1996364, 1996366, 1996367

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	103		P	80 - 120
Toxaphene	76.3*		F	80 - 120

Reference Method: EPA 8270D

Run ID: A84513

Included Lab Sample IDs: 1996368, 1996369

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	96.2		P	80 - 120
Hexazinone	95.7		P	80 - 120

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			Precision	
							LCS	MS
EPA 180.1 Rev. 2.0	Turbidity						5.94	
	Turbidity						2.92	
EPA 200.7 Rev. 4.4	Calcium	107		103	105	107		1.72
	Iron	103		106	103	104		0.949
	Magnesium	108		103	106	108		0.931
	Potassium	102		105	102	104		1.52
	Sodium	102		107	101			1.13
	Zinc	102		103	102	103		0.921
EPA 200.8 Rev. 5.4	Arsenic	106		106	104	103		0.953
	Cadmium	106		104	104	105		0.878
	Chromium	99.9		101	102	101		1.53
	Copper	100		98.0	101	98.9		1.76
	Lead	101		101	102	102		0.526
	Nickel	104		102	103	102		0.357
	Silver	93.4		93.3	93.4	93.0		0.478
EPA 300.0 Rev. 2.1	Chloride	101		105			0.228	
	Sulfate	101		101			0.222	
EPA 350.1 Rev. 2.0	Ammonia-N	99.5		97.2	96.9			0.142
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	94.9		106	98.2			5.01
EPA 353.2 Rev. 2.0	NO2NO3-N	102		102	102			0.295
EPA 365.1 Rev. 2.0	Total-P	103		100	103			2.26
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.9		96.3	97.0			0.606
EPA 8270D	Acetochlor	102	104	108	92.1	2.12		16.0
	Alachlor	94.1	100	99.2	87.8	6.42		12.1
	Aldrin	36.5	25.9	42.3	50.2	34.2		17.2
	Alpha-BHC	74.6	73.8	83.7	88.0	1.17		5.04
	Alpha-Chlordane	71.7	63.5	75.7	65.0	12.1		15.2
	Ametryn	92.1	106	111	96.3	13.9		14.3
	Atrazine	103	97.9			4.70		6.91
	Atrazine Desethyl	90.1	56.4	80.2	86.7	46.0		5.23
	Azinphos Methyl	105	98.7	96.5	99.1	6.03		2.66
	Beta-BHC	103	107	85.5	96.6	3.75		12.3
	Bromacil	98.1	83.9			15.6		14.4
	Butylate	63.2	67.6	34.0	50.4	6.78		38.9
	Carbophenothion	66.6	57.5	75.4	67.7	14.8		10.8
	Chlorothalonil	92.0	91.3	32.5	27.1	0.822		18.1
	Chlorpyrifos Ethyl	89.9	87.5	90.1	78.7	2.65		13.5
	Chlorpyrifos Methyl	89.2	83.3	91.1	85.1	6.90		6.86
	Cyanazine	165	93.5	167	182	55.2		8.36
	Cypermethrin	41.3	57.5	64.1	58.5	32.8		9.01
	DDD-p,p'	97.3	97.4	90.9	87.2	0.0603		4.13
	DDE-p,p'	60.7	56.4	55.0	64.3	7.34		15.5
	DDT-p,p'	56.6	69.7	65.0	63.3	20.7		2.73
	Delta-BHC	108	107	97.0	107	0.690		9.45
	Demeton	78.2	77.2	68.9	88.1	1.38		24.5
	Diazinon	97.9	95.9	108	101	2.05		6.20
	Dicofol	82.0	91.1	93.3	85.4	10.4		8.85
	Dieldrin	91.8	68.5	71.7	84.5	29.1		16.3
	Disulfoton	87.7	81.0	92.3	98.1	7.89		6.02
	Endosulfan I	87.8	69.2	72.4	92.9	23.7		24.8
	Endosulfan II	97.1	84.8	94.1	80.9	13.5		15.1
	Endosulfan Sulfate	93.6	94.9	76.7	78.6	1.39		2.43
	Endrin	86.7	79.5	96.4	76.4	8.63		23.2
	Endrin Aldehyde	96.7	88.3	75.2	60.3	9.12		22.0

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Endrin Ketone	93.9	90.1	79.0	83.9	4.13	5.94
	EPTC	61.8	64.6	31.3	50.1	4.47	46.1
	Ethion	87.0	93.0	90.4	64.9	6.66	32.8
	Ethoprop	67.8	64.0	82.7	77.8	5.87	6.09
	Fenamiphos	101	93.5	91.7	79.6	7.52	14.0
	Fipronil	102	106	112	86.1	3.47	19.6
	Fipronil Sulfide	93.3	93.9	110	77.1	0.582	28.7
	Fipronil Sulfone	87.8	93.9	93.8	66.8	6.67	22.9
	Fonofos	89.4	79.2	91.9	96.3	12.1	4.68
	Gamma-BHC	104	108	128	107	3.54	17.3
	Gamma-Chlordane	61.4	56.6	69.1	59.6	8.07	14.8
	Heptachlor	49.5	38.2	60.4	52.1	25.8	14.7
	Heptachlor Epoxide	88.5	72.9	85.5	73.2	19.3	15.5
	Hexazinone	95.4	94.9	103	91.1	0.541	6.47
	Malathion	91.4	93.8	86.4	76.0	2.52	10.5
	Metalaxyl	104	91.7	99.1	86.0	12.6	10.3
	Methoxychlor	81.3	84.1	78.6	79.3	3.45	0.882
	Metolachlor	96.1	101	97.5	87.9	4.99	8.27
	Metribuzin	139	95.2	170	169	37.1	0.839
	Mevinphos	95.6	72.7	82.1	94.1	27.2	13.6
	Mirex	24.0	28.0	44.4	45.1	15.7	1.48
	Molinate	69.5	68.9	47.6	55.8	0.856	16.0
	Norflurazon	99.9	103	102	82.6	2.65	13.7
	Parathion Ethyl	89.3	91.6	97.5	87.0	2.62	11.3
	Parathion Methyl	99.5	89.8	105	97.2	10.2	7.87
	Pendimethalin	112	110	125	111	2.23	11.9
	Permethrin	40.9	48.6	61.4	60.9	17.1	0.835
	Phorate	81.2	74.2	77.7	101	9.06	25.8
	Prometon	96.5	98.6	114	102	2.16	11.0
	Prometryn	96.7	103	87.1	76.4	5.89	13.1
	Simazine	105	94.3	106	82.5	10.5	14.6
	Terbufos	91.7	80.7	95.2	101	12.8	6.29
	Terbuthylazine	99.2	97.3	104	90.1	1.90	14.1
	Trifluralin	52.2	49.2	60.1	61.3	5.91	1.94
EPA 8276	Chlordane	101	105	79.2	83.5	4.38	4.88
	Toxaphene	68.9	70.5	57.7	53.9	2.30	6.84
EPA 8321B	2,4-D	81.0		66.2	43.6		10.9
	3-Hydroxycarbofuran	102		83.5	73.8		12.4
	Acetaminophen	104		128	98.4		26.2
	Aldicarb	104		61.4	52.2		16.2
	Aldicarb Sulfone	110		97.6	88.0		10.3
	Aldicarb Sulfoxide	85.1		64.8	71.3		9.46
	AMPA	103		55.1	61.2		5.49
	Bentazon	74.7		11.1	3.35		20.9
	Carbamazepine	72.5		59.6	57.9		2.85
	Carbaryl	95.4		44.3	40.6		8.56
	Carbofuran	107		52.7	46.1		13.3
	Diuron	62.7		45.7	41.0		7.58
	Endothall	91.8		122	121		1.43
	Fenuron	105		70.7	55.9		23.5
	Fluridone	75.6		61.9	56.1		8.68
	Glufosinate	105		95.3	96.2		0.871
	Glyphosate	119		105	115		4.07
	Hydrocodone	96.3		79.6	76.6		3.88

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Imazapyr	89.2	104	99.3		2.21
	Imidacloprid	109	119	134		7.73
	Linuron	72.7	60.5	51.1		16.8
	MCPP	86.8	89.8	85.3		5.07
	Methiocarb	78.3	67.9	59.5		13.3
	Methomyl	92.0	74.9	67.0		11.1
	Oxamyl	111	82.1	81.6		0.609
	Primidone	96.7	93.0	78.9		15.4
	Propoxur	93.8	48.6	40.1		19.1
	Pyraclostrobin	69.3	81.3	70.8		13.7
	Sucralose	116	123	116		5.54
	Triclopyr	78.4	104	103		0.503
SM 2120 B	Color (true)				0.474	
	Color (true)				1.40	
SM 2320 B-97	Total Alkalinity	104			0.972	
SM 2540 C-97	TDS				2.46	
	TDS				3.70	
SM 2540 D-97	TSS				4.26	
SM 4500 F-C-97	Fluoride	95.7	95.6	96.1		0.516
SM 5310 B-00	Organic Carbon	97.1	97.9	97.7		0.171

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1996333, 1996336, 1996337
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1996370, 1996371, 1996372
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1996370, 1996371, 1996372
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1996333, 1996336, 1996337
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1996333, 1996336, 1996337
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1996334, 1996338, 1996339
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1996334, 1996338, 1996339
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1996334, 1996338, 1996339
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1996334, 1996338, 1996339
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1996335, 1996340, 1996341
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1996364, 1996366, 1996367
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1996365, 1996368, 1996369
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1996364, 1996366, 1996367
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	1996356, 1996358, 1996359
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1996357, 1996360, 1996361, 1996362, 1996363
SM 2120 B / E31780	True Color measured at 450 nm	1996333, 1996336, 1996337
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1996333, 1996336, 1996337
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1996333, 1996336, 1996337
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	1996333, 1996336, 1996337

Reference Method Descriptions

Method / DoH Cert #	Description	<u>Associated Samples</u>
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1996333, 1996336, 1996337
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1996334, 1996338, 1996339

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	05/31/2018			05/31/2018 15:23	William L. Brown IV	1996333, 1996336, 1996337
EPA 200.7 Rev. 4.4	05/31/2018	06/04/2018 15:00	Elliott D. Healy	06/05/2018 18:39	Betina Topolski	1996370
	05/31/2018	06/04/2018 15:00	Elliott D. Healy	06/05/2018 18:46	Betina Topolski	1996371
	05/31/2018	06/04/2018 15:00	Elliott D. Healy	06/05/2018 18:54	Betina Topolski	1996372
EPA 200.8 Rev. 5.4	05/31/2018	06/04/2018 15:00	Elliott D. Healy	06/05/2018 16:41	Nadine Brooks	1996370
	05/31/2018	06/04/2018 15:00	Elliott D. Healy	06/05/2018 16:50	Nadine Brooks	1996371
	05/31/2018	06/04/2018 15:00	Elliott D. Healy	06/05/2018 17:29	Nadine Brooks	1996372
	05/31/2018	06/04/2018 15:00	Elliott D. Healy	06/08/2018 17:02	Nadine Brooks	1996370
	05/31/2018	06/04/2018 15:00	Elliott D. Healy	06/08/2018 17:08	Nadine Brooks	1996371
	05/31/2018	06/04/2018 15:00	Elliott D. Healy	06/08/2018 17:15	Nadine Brooks	1996372
EPA 300.0 Rev. 2.1	05/31/2018			06/04/2018 17:19	Lipi Saha	1996333
	05/31/2018			06/04/2018 20:18	Lipi Saha	1996336
	05/31/2018			06/04/2018 20:30	Lipi Saha	1996337
EPA 350.1 Rev. 2.0	05/31/2018			06/11/2018 12:41	Julia Storbeck	1996334
	05/31/2018			06/11/2018 12:50	Julia Storbeck	1996338
	05/31/2018			06/11/2018 12:52	Julia Storbeck	1996339
EPA 351.2 Rev. 2.0	05/31/2018	06/06/2018 10:40	Adrian Shelby	06/12/2018 09:17	Joseph Suarez	1996334
	05/31/2018	06/06/2018 10:40	Adrian Shelby	06/12/2018 09:18	Joseph Suarez	1996338
	05/31/2018	06/06/2018 10:40	Adrian Shelby	06/12/2018 09:20	Joseph Suarez	1996339
EPA 353.2 Rev. 2.0	05/31/2018			06/01/2018 13:44	Lauren Bottorf	1996334
	05/31/2018			06/01/2018 13:45	Lauren Bottorf	1996338
	05/31/2018			06/01/2018 13:46	Lauren Bottorf	1996339
EPA 365.1 Rev. 2.0	05/31/2018	06/05/2018 11:00	Sima Feizi	06/07/2018 16:08	Beverly Y. Sanders	1996338
	05/31/2018	06/05/2018 11:00	Sima Feizi	06/07/2018 16:10	Beverly Y. Sanders	1996339
	05/31/2018	06/05/2018 11:00	Sima Feizi	06/07/2018 16:51	Beverly Y. Sanders	1996334
EPA 365.1 Rev. 2.0 dissolved	05/31/2018			05/31/2018 15:45	Megan Treadwell	1996335
	05/31/2018			05/31/2018 15:47	Megan Treadwell	1996340
	05/31/2018			05/31/2018 15:48	Megan Treadwell	1996341
EPA 8270D	05/31/2018	06/01/2018 09:00	Rasheda Ghaffari	06/05/2018 21:32	Dinesh Mishra	1996364
	05/31/2018	06/01/2018 09:00	Rasheda Ghaffari	06/05/2018 22:04	Dinesh Mishra	1996366
	05/31/2018	06/01/2018 09:00	Rasheda Ghaffari	06/05/2018 22:36	Dinesh Mishra	1996367
	05/31/2018	06/01/2018 13:30	Fe-Val Siddell	06/05/2018 15:50	Vandana T. Nagar	1996365
	05/31/2018	06/01/2018 13:30	Fe-Val Siddell	06/05/2018 16:14	Vandana T. Nagar	1996368
	05/31/2018	06/01/2018 13:30	Fe-Val Siddell	06/05/2018 16:38	Vandana T. Nagar	1996369
	05/31/2018	06/01/2018 13:30	Fe-Val Siddell	06/08/2018 12:59	Vandana T. Nagar	1996368
	05/31/2018	06/01/2018 13:30	Fe-Val Siddell	06/08/2018 13:23	Vandana T. Nagar	1996369
	05/31/2018	06/01/2018 13:30	Fe-Val Siddell	06/08/2018 14:35	Vandana T. Nagar	1996368
	05/31/2018	06/01/2018 13:30	Fe-Val Siddell	06/08/2018 14:59	Vandana T. Nagar	1996369
EPA 8276	05/31/2018	06/01/2018 09:00	Rasheda Ghaffari	06/11/2018 22:55	Dinesh Mishra	1996364
	05/31/2018	06/01/2018 09:00	Rasheda Ghaffari	06/11/2018 23:51	Dinesh Mishra	1996366

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8276	05/31/2018	06/01/2018 09:00	Rasheda Ghaffari	06/12/2018 00:46	Dinesh Mishra	1996367
EPA 8321B	05/31/2018	06/01/2018 10:00	Hoor Shaik	06/01/2018 18:40	Juyoung Kim	1996357
	05/31/2018	06/01/2018 10:00	Hoor Shaik	06/02/2018 01:01	Juyoung Kim	1996360
	05/31/2018	06/01/2018 10:00	Hoor Shaik	06/02/2018 01:35	Juyoung Kim	1996361
	05/31/2018	06/01/2018 10:00	Hoor Shaik	06/02/2018 02:10	Juyoung Kim	1996362
	05/31/2018	06/01/2018 10:00	Hoor Shaik	06/02/2018 02:45	Juyoung Kim	1996363
	05/31/2018	06/01/2018 10:00	Hoor Shaik	06/03/2018 09:18	Juyoung Kim	1996356
	05/31/2018	06/01/2018 10:00	Hoor Shaik	06/03/2018 09:52	Juyoung Kim	1996358
	05/31/2018	06/01/2018 10:00	Hoor Shaik	06/03/2018 10:27	Juyoung Kim	1996359
	05/31/2018	06/01/2018 10:00	Hoor Shaik	06/03/2018 17:56	Juyoung Kim	1996362
	05/31/2018	06/01/2018 10:00	Hoor Shaik	06/03/2018 18:31	Juyoung Kim	1996363
	05/31/2018	06/01/2018 10:00	Hoor Shaik	06/07/2018 22:53	Juyoung Kim	1996357
	05/31/2018	06/01/2018 10:00	Hoor Shaik	06/08/2018 00:37	Juyoung Kim	1996360
	05/31/2018	06/01/2018 10:00	Hoor Shaik	06/08/2018 01:46	Juyoung Kim	1996361
	05/31/2018	06/01/2018 10:00	Hoor Shaik	06/08/2018 05:48	Juyoung Kim	1996361
	05/31/2018	06/01/2018 16:00	Hoor Shaik	06/05/2018 08:30	Mohammad Ghaffari	1996357
	05/31/2018	06/01/2018 16:00	Hoor Shaik	06/05/2018 08:49	Mohammad Ghaffari	1996360
	05/31/2018	06/01/2018 16:00	Hoor Shaik	06/05/2018 10:25	Mohammad Ghaffari	1996361
	05/31/2018	06/01/2018 16:00	Hoor Shaik	06/05/2018 10:43	Mohammad Ghaffari	1996362
	05/31/2018	06/01/2018 16:00	Hoor Shaik	06/05/2018 11:02	Mohammad Ghaffari	1996363
SM 2120 B	05/31/2018			05/31/2018 14:59	Tanya Welborn	1996336
	05/31/2018			05/31/2018 15:03	Tanya Welborn	1996337
	05/31/2018			05/31/2018 15:14	Tanya Welborn	1996333
SM 2320 B-97	05/31/2018			06/01/2018 18:12	Dale L. Simmons	1996333
	05/31/2018			06/01/2018 18:22	Dale L. Simmons	1996336
	05/31/2018			06/01/2018 18:32	Dale L. Simmons	1996337
SM 2540 C-97	05/31/2018			06/01/2018 15:40	William L. Brown IV	1996333, 1996336, 1996337
SM 2540 D-97	05/31/2018			06/01/2018 14:30	William L. Brown IV	1996333, 1996336, 1996337
SM 4500 F-C-97	05/31/2018			06/01/2018 18:12	Dale L. Simmons	1996333
	05/31/2018			06/01/2018 18:22	Dale L. Simmons	1996336
	05/31/2018			06/01/2018 18:32	Dale L. Simmons	1996337
SM 5310 B-00	05/31/2018			06/07/2018 03:39	Megan Treadwell	1996334
	05/31/2018			06/07/2018 03:53	Megan Treadwell	1996338
	05/31/2018			06/07/2018 04:08	Megan Treadwell	1996339