

Chemical Analysis Report

SW-DIST-2018-03-01-01

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

Event Description: **Alafia, Delany, Thirtymile**
Request ID: **RQ-2018-02-26-12**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
Attn: Judy Ashton

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Certified by: Colin Wright, Program Administrator

Date Certified: 06-APR-2018 15:46

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light-colored rectangular 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: ALAFIA RIVER @ CENTER AVE

Collection Date/Time: 02/28/2018 12:45

Field ID: G2SW0045

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970873	EPA 180.1 Rev. 2.0	Turbidity	2.7		NTU	P340809	
	EPA 300.0 Rev. 2.1	Chloride	32		mg Cl/L	P341032	
		Sulfate	90		mg SO4/L	P341033	
	SM 2120 B	Color (true)	37		PCU	P340814	
	SM 2320 B-97	Total Alkalinity	118		mg CaCO3/L	P341245	
	SM 2540 C-97	TDS	318	A	mg/L	P341152	
	SM 2540 D-97	TSS	7	IA	mg/L	P340935	
	SM 4500 F-C-97	Fluoride	1.0		mg F/L	P341248	
1970874	EPA 350.1 Rev. 2.0	Ammonia-N	0.025		mg N/L	P340971	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.56		mg N/L	P340828	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.1		mg N/L	P340887	
	EPA 365.1 Rev. 2.0	Total-P	0.80		mg P/L	P340868	
	SM 5310 B-00	Organic Carbon	7.2		mg C/L	P340978	
1970875	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.72		mg P/L	P340821	
1970911	EPA 200.7 Rev. 4.4	Calcium	55.1		mg/L	P340926	
		Iron	160		ug/L	P340926	
		Magnesium	16.7		mg/L	P340926	
		Potassium	3.9		mg/L	P340926	
		Sodium	32.6		mg/L	P340926	
		Zinc	5.0	U	ug/L	P340926	
	EPA 200.8 Rev. 5.4	Arsenic	1.36		ug/L	P341619	
		Cadmium	0.048	I	ug/L	P341619	
		Chromium	0.55	I	ug/L	P341619	
		Copper	0.65	I	ug/L	P341619	
		Lead	0.12	I	ug/L	P341619	
		Nickel	1.03		ug/L	P341619	
		Silver	0.010	U	ug/L	P340926	

Ref. Method and Comment:

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

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: ALAFIA RIVER @ CENTER AVE

Collection Date/Time: 02/28/2018 12:45

Field ID: G2SW0045

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970897	EPA 8321B	Aldicarb	0.020	U	ug/L	P340782	
		Aldicarb Sulfone	0.0020	U	ug/L	P340782	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P340782	
		Carbaryl	0.0020	U	ug/L	P340782	
		Carbofuran	0.0020	U	ug/L	P340782	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P340782	
		Methiocarb	0.0020	U	ug/L	P340782	
		Methomyl	0.0020	U	ug/L	P340782	
		Oxamyl	0.0020	U	ug/L	P340782	

Field ID: G2SW0045

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970897	EPA 8321B	Propoxur	0.0020	U	ug/L	P340782	
1970898		2,4-D	0.0020	U	ug/L	P340782	
		Sucralose**	1.0		ug/L	P340834	
		Bentazon	0.0080	J	ug/L	P340782	MS
		MCP	0.0020	UJ	ug/L	P340782	MS
		Triclopyr**	0.0040	UJ	ug/L	P340782	MS
		Imidacloprid	0.018		ug/L	P340782	
		Diuron	0.0050	I	ug/L	P340782	
		Pyraclostrobin**	0.0020	U	ug/L	P340782	
		Primidone**	0.0040	U	ug/L	P340782	
		Linuron	0.0040	U	ug/L	P340782	
		Acetaminophen**	0.0080	U	ug/L	P340782	
		Fenuron	0.0080	U	ug/L	P340782	
		Imazapyr**	0.053	J	ug/L	P340782	MS
		Carbamazepine**	0.0021		ug/L	P340782	
		Fluridone**	0.0050		ug/L	P340782	
		Glyphosate**	0.56		ug/L	P340705	
		AMPA**	0.86		ug/L	P340705	
1970905	EPA 8270D	Aldrin	4.1	U	ng/L	P340939	
		Alpha-BHC	2.1	U	ng/L	P340939	
		Beta-BHC	4.1	U	ng/L	P340939	
		Delta-BHC	4.1	U	ng/L	P340939	
		Gamma-BHC	4.1	U	ng/L	P340939	
		Carbophenothion	4.1	U	ng/L	P340939	RPD
		Chlorothalonil	2.1	UJ	ng/L	P340939	RPD
		Cypermethrin	21	U	ng/L	P340939	
		DDD-p,p'	3.1	U	ng/L	P340939	
		DDE-p,p'	3.1	U	ng/L	P340939	
		DDT-p,p'	3.1	U	ng/L	P340939	
		Dieldrin	4.1	U	ng/L	P340939	
		Endosulfan I	4.1	U	ng/L	P340939	RPD
		Endosulfan II	4.1	U	ng/L	P340939	RPD
		Endosulfan Sulfate	2.1	U	ng/L	P340939	
		Endrin	2.1	U	ng/L	P340939	
		Endrin Aldehyde	2.1	U	ng/L	P340939	MS, RPD
		Heptachlor	1.6	U	ng/L	P340939	
		Heptachlor Epoxide	2.1	U	ng/L	P340939	
		Methoxychlor	4.1	U	ng/L	P340939	
		Mirex	2.1	U	ng/L	P340939	
		Permethrin	10	U	ng/L	P340939	
		Trifluralin	1.0	U	ng/L	P340939	
		Alpha-Chlordane	1.0	U	ng/L	P340939	
		Gamma-Chlordane	1.0	U	ng/L	P340939	
		Endrin Ketone	2.1	U	ng/L	P340939	
		Dicofol	31	U	ng/L	P340939	

Field ID: G2SW0045

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970905	EPA 8276	Chlordane**	2.6	U	ng/L	P340939	
		Toxaphene**	31	U	ng/L	P340939	
1970906	EPA 8270D	Alachlor	0.24	U	ng/L	P340974	
		Ametryn	0.31	U	ng/L	P340974	
		Atrazine	13		ng/L	P340974	
		Atrazine Desethyl	6.0		ng/L	P340974	
		Azinphos Methyl	2.2	U	ng/L	P340974	
		Bromacil	25	J	ng/L	P340974	LCS
		Butylate	0.39	U	ng/L	P340974	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P340974	
		Chlorpyrifos Methyl	0.097	U	ng/L	P340974	
		Demeton	1.9	U	ng/L	P340974	
		Diazinon	0.17	I	ng/L	P340974	
		Disulfoton	0.48	U	ng/L	P340974	
		EPTC	1.2	U	ng/L	P340974	
		Ethion	0.15	U	ng/L	P340974	
		Ethoprop	0.097	U	ng/L	P340974	
		Fenamiphos	0.24	U	ng/L	P340974	
		Fipronil	0.24	U	ng/L	P340974	
		Fipronil Sulfide	0.15	I	ng/L	P340974	
		Fipronil Sulfone	0.49	I	ng/L	P340974	
		Hexazinone	2.4		ng/L	P340974	
		Malathion	0.34	U	ng/L	P340974	
		Metribuzin	0.29	IJ	ng/L	P340974	LCS, MS
		Mevinphos	0.48	U	ng/L	P340974	
		Molinate	0.29	U	ng/L	P340974	
		Norflurazon	11		ng/L	P340974	
		Pendimethalin	0.97	U	ng/L	P340974	
		Phorate	0.24	U	ng/L	P340974	
		Prometon	0.87	U	ng/L	P340974	
		Prometryn	0.19	U	ng/L	P340974	
		Simazine	3.0		ng/L	P340974	
		Terbufos	0.097	U	ng/L	P340974	
		Terbuthylazine	0.41	U	ng/L	P340974	
		Fonofos	0.19	U	ng/L	P340974	
		Metalaxyl	3.2		ng/L	P340974	
		Metolachlor	1.9		ng/L	P340974	
		Acetochlor	0.24	U	ng/L	P340974	
		Cyanazine	0.48	U	ng/L	P340974	
		Parathion Ethyl	0.24	U	ng/L	P340974	
		Parathion Methyl	0.24	U	ng/L	P340974	

Ref. Method and Comment:

EPA 8321B: Fenuron was detected in the method blank slightly above the MDL. Refer to the narrative for an explanation of QC Codes.

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

EPA 8270D: MS accuracy for Atrazine, Simazine and Fipronil Sulfone 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: 02/28/2018 13:50

Field ID: G1SW0066

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970876	EPA 180.1 Rev. 2.0	Turbidity	3.9	A	NTU	P340809	
	EPA 300.0 Rev. 2.1	Chloride	30		mg Cl/L	P341032	
		Sulfate	19		mg SO4/L	P341033	
	SM 2120 B	Color (true)	67		PCU	P340814	
	SM 2320 B-97	Total Alkalinity	145	A	mg CaCO3/L	P341245	
	SM 2540 C-97	TDS	258		mg/L	P341152	
	SM 2540 D-97	TSS	2	U	mg/L	P340935	
	SM 4500 F-C-97	Fluoride	0.23		mg F/L	P341248	
1970878	EPA 350.1 Rev. 2.0	Ammonia-N	0.036		mg N/L	P340971	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.84		mg N/L	P340828	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14		mg N/L	P340887	
	EPA 365.1 Rev. 2.0	Total-P	0.23		mg P/L	P340868	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P340978	
1970880	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.15		mg P/L	P340821	
1970912	EPA 200.7 Rev. 4.4	Calcium	64.6		mg/L	P340926	
		Iron	590		ug/L	P340926	
		Magnesium	4.30		mg/L	P340926	
		Potassium	3.3		mg/L	P340926	
		Sodium	19.7		mg/L	P340926	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P340926	
		Arsenic	1.70		ug/L	P341619	
		Cadmium	0.020	U	ug/L	P341619	
		Chromium	0.64	I	ug/L	P341619	
		Copper	0.63	I	ug/L	P341619	
		Lead	0.31		ug/L	P341619	
		Nickel	0.90		ug/L	P341619	
		Silver	0.010	U	ug/L	P340926	

Ref. Method and Comment:

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

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Delany Creek @ Maydell Dr

Collection Date/Time: 02/28/2018 13:50

Field ID: G1SW0066

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970899	EPA 8321B	Aldicarb	0.020	U	ug/L	P340782	
		Aldicarb Sulfone	0.0020	U	ug/L	P340782	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P340782	
		Carbaryl	0.0020	U	ug/L	P340782	
		Carbofuran	0.0020	U	ug/L	P340782	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P340782	
		Methiocarb	0.0020	U	ug/L	P340782	
		Methomyl	0.0020	U	ug/L	P340782	
		Oxamyl	0.0020	U	ug/L	P340782	

Field ID: G1SW0066

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970899	EPA 8321B	Propoxur	0.0020	U	ug/L	P340782	
1970901		2,4-D	0.0020	U	ug/L	P340782	
		Sucralose**	0.46		ug/L	P340834	
		Bentazon	0.026		ug/L	P340782	MS
		MCP	0.0020	U	ug/L	P340782	MS
		Triclopyr**	0.0040	U	ug/L	P340782	MS
		Imidacloprid	0.074		ug/L	P340782	
		Diuron	0.0021	I	ug/L	P340782	
		Pyraclostrobin**	0.0020	U	ug/L	P340782	
		Primidone**	0.0040	U	ug/L	P340782	
		Linuron	0.0040	U	ug/L	P340782	
		Acetaminophen**	0.0080	U	ug/L	P340782	
		Fenuron	0.0080	U	ug/L	P340782	
		Imazapyr**	0.28		ug/L	P340782	MS
		Carbamazepine**	0.0016		ug/L	P340782	
		Fluridone**	0.020		ug/L	P340782	
		Glyphosate**	3.6		ug/L	P340705	
		AMPA**	2.7		ug/L	P340705	
1970907	EPA 8270D	Aldrin	4.1	U	ng/L	P340939	
		Alpha-BHC	2.1	U	ng/L	P340939	
		Beta-BHC	4.1	U	ng/L	P340939	
		Delta-BHC	4.1	U	ng/L	P340939	
		Gamma-BHC	4.1	U	ng/L	P340939	
		Carbophenothion	4.1	U	ng/L	P340939	RPD
		Chlorothalonil	2.1	UJ	ng/L	P340939	RPD
		Cypermethrin	21	U	ng/L	P340939	
		DDD-p,p'	3.1	U	ng/L	P340939	
		DDE-p,p'	3.1	U	ng/L	P340939	
		DDT-p,p'	3.1	U	ng/L	P340939	
		Dieldrin	4.1	U	ng/L	P340939	
		Endosulfan I	4.1	U	ng/L	P340939	RPD
		Endosulfan II	4.1	U	ng/L	P340939	RPD
		Endosulfan Sulfate	2.1	U	ng/L	P340939	
		Endrin	2.1	U	ng/L	P340939	
		Endrin Aldehyde	2.1	U	ng/L	P340939	MS, RPD
		Heptachlor	1.6	U	ng/L	P340939	
		Heptachlor Epoxide	2.1	U	ng/L	P340939	
		Methoxychlor	4.1	U	ng/L	P340939	
		Mirex	2.1	U	ng/L	P340939	
		Permethrin	10	U	ng/L	P340939	
		Trifluralin	1.0	U	ng/L	P340939	
		Alpha-Chlordane	1.0	U	ng/L	P340939	
		Gamma-Chlordane	1.0	U	ng/L	P340939	
		Endrin Ketone	2.1	U	ng/L	P340939	
		Dicofol	31	U	ng/L	P340939	

Field ID: G1SW0066

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970907	EPA 8276	Chlordane**	4.9	I	ng/L	P340939	
		Toxaphene**	31	U	ng/L	P340939	
1970909	EPA 8270D	Alachlor	0.24	U	ng/L	P340974	
		Ametryn	2.8		ng/L	P340974	
		Atrazine	260		ng/L	P340974	
		Atrazine Desethyl	26		ng/L	P340974	
		Azinphos Methyl	2.1	U	ng/L	P340974	
		Bromacil	0.47	UJ	ng/L	P340974	LCS
		Butylate	0.38	U	ng/L	P340974	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P340974	
		Chlorpyrifos Methyl	0.094	U	ng/L	P340974	
		Demeton	1.9	U	ng/L	P340974	
		Diazinon	0.12	U	ng/L	P340974	
		Disulfoton	0.47	U	ng/L	P340974	
		EPTC	1.2	U	ng/L	P340974	
		Ethion	0.14	U	ng/L	P340974	
		Ethoprop	0.094	U	ng/L	P340974	
		Fenamiphos	0.24	U	ng/L	P340974	
		Fipronil	0.25	I	ng/L	P340974	
		Fipronil Sulfide	0.84		ng/L	P340974	
		Fipronil Sulfone	1.2		ng/L	P340974	
		Hexazinone	21		ng/L	P340974	
		Malathion	0.33	U	ng/L	P340974	
		Metribuzin	0.19	UJ	ng/L	P340974	LCS, MS
		Mevinphos	0.47	U	ng/L	P340974	
		Molinate	0.28	U	ng/L	P340974	
		Norflurazon	0.47	U	ng/L	P340974	
		Pendimethalin	0.94	U	ng/L	P340974	
		Phorate	0.24	U	ng/L	P340974	
		Prometon	0.85	U	ng/L	P340974	
		Prometryn	0.19	U	ng/L	P340974	
		Simazine	1.7	I	ng/L	P340974	
		Terbufos	0.094	U	ng/L	P340974	
		Terbuthylazine	0.40	U	ng/L	P340974	
		Fonofos	0.19	U	ng/L	P340974	
		Metalaxyl	0.24	U	ng/L	P340974	
		Metolachlor	0.24	U	ng/L	P340974	
		Acetochlor	0.24	U	ng/L	P340974	
		Cyanazine	0.47	U	ng/L	P340974	
		Parathion Ethyl	0.24	U	ng/L	P340974	
		Parathion Methyl	0.24	U	ng/L	P340974	

Ref. Method and Comment:

EPA 8321B: Fenuron was detected in the method blank slightly above the MDL.

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

EPA 8270D: MS accuracy for Atrazine, Simazine and Fipronil Sulfone 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: DELANEY CRK @ 36TH AVE

Collection Date/Time: 02/28/2018 13:30

Field ID: G1SW0046

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970877	EPA 180.1 Rev. 2.0	Turbidity	4.4		NTU	P340809	
	EPA 300.0 Rev. 2.1	Chloride	47		mg Cl/L	P341032	
		Sulfate	20		mg SO4/L	P341033	
	SM 2120 B	Color (true)	68		PCU	P340814	
	SM 2320 B-97	Total Alkalinity	158		mg CaCO3/L	P341245	
	SM 2540 C-97	TDS	305		mg/L	P341152	
	SM 2540 D-97	TSS	2	U	mg/L	P340935	
	SM 4500 F-C-97	Fluoride	0.23		mg F/L	P341248	
1970879	EPA 350.1 Rev. 2.0	Ammonia-N	0.053		mg N/L	P340971	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.83		mg N/L	P340828	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14		mg N/L	P340887	
	EPA 365.1 Rev. 2.0	Total-P	0.24		mg P/L	P340868	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P341044	
1970881	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.16		mg P/L	P340821	
1970913	EPA 200.7 Rev. 4.4	Calcium	69.7		mg/L	P340926	
		Iron	650		ug/L	P340926	
		Magnesium	4.91		mg/L	P340926	
		Potassium	3.3		mg/L	P340926	
		Sodium	27.7		mg/L	P340926	
		Zinc	5.0	U	ug/L	P340926	
	EPA 200.8 Rev. 5.4	Arsenic	1.71		ug/L	P341619	
		Cadmium	0.020	U	ug/L	P341619	
		Chromium	0.62	I	ug/L	P341619	
		Copper	0.58	I	ug/L	P341619	
		Lead	0.34		ug/L	P341619	
		Nickel	0.83		ug/L	P341619	
		Silver	0.010	U	ug/L	P340926	

Ref. Method and Comment:

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

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Delany Creek @ 36th Ave

Collection Date/Time: 02/28/2018 13:30

Field ID: G1SW0046

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970900	EPA 8321B	Aldicarb	0.020	U	ug/L	P340782	
		Aldicarb Sulfone	0.0020	U	ug/L	P340782	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P340782	
		Carbaryl	0.0020	U	ug/L	P340782	
		Carbofuran	0.0020	U	ug/L	P340782	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P340782	
		Methiocarb	0.0020	U	ug/L	P340782	
		Methomyl	0.0020	U	ug/L	P340782	
		Oxamyl	0.0020	U	ug/L	P340782	

Field ID: G1SW0046

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970900	EPA 8321B	Propoxur	0.0020	U	ug/L	P340782	
1970902		2,4-D	0.0020	U	ug/L	P340782	
		Sucralose**	0.49		ug/L	P340834	
		Bentazon	0.026		ug/L	P340782	MS
		MCP	0.0020	U	ug/L	P340782	MS
		Triclopyr**	0.0040	U	ug/L	P340782	MS
		Imidacloprid	0.076		ug/L	P340782	
		Diuron	0.0024	I	ug/L	P340782	
		Pyraclostrobin**	0.0020	U	ug/L	P340782	
		Primidone**	0.0040	U	ug/L	P340782	
		Linuron	0.0040	U	ug/L	P340782	
		Acetaminophen**	0.0080	U	ug/L	P340782	
		Fenuron	0.0080	U	ug/L	P340782	
		Imazapyr**	0.28		ug/L	P340782	MS
		Carbamazepine**	0.0021		ug/L	P340782	
		Fluridone**	0.023		ug/L	P340782	
		Glyphosate**	3.2		ug/L	P340705	
		AMPA**	2.8		ug/L	P340705	
1970908	EPA 8270D	Aldrin	4.4	U	ng/L	P340939	
		Alpha-BHC	2.2	U	ng/L	P340939	
		Beta-BHC	4.4	U	ng/L	P340939	
		Delta-BHC	4.4	U	ng/L	P340939	
		Gamma-BHC	4.4	U	ng/L	P340939	
		Carbophenothion	4.4	U	ng/L	P340939	RPD
		Chlorothalonil	2.2	UJ	ng/L	P340939	RPD
		Cypermethrin	22	U	ng/L	P340939	
		DDD-p,p'	3.3	U	ng/L	P340939	
		DDE-p,p'	3.3	U	ng/L	P340939	
		DDT-p,p'	3.3	U	ng/L	P340939	
		Dieldrin	4.4	U	ng/L	P340939	
		Endosulfan I	4.4	U	ng/L	P340939	RPD
		Endosulfan II	4.4	U	ng/L	P340939	RPD
		Endosulfan Sulfate	2.2	U	ng/L	P340939	
		Endrin	2.2	U	ng/L	P340939	
		Endrin Aldehyde	2.2	U	ng/L	P340939	MS, RPD
		Heptachlor	1.7	U	ng/L	P340939	
		Heptachlor Epoxide	2.2	U	ng/L	P340939	
		Methoxychlor	4.4	U	ng/L	P340939	
		Mirex	2.2	U	ng/L	P340939	
		Permethrin	11	U	ng/L	P340939	
		Trifluralin	1.1	U	ng/L	P340939	
		Alpha-Chlordane	1.1	U	ng/L	P340939	
		Gamma-Chlordane	1.1	U	ng/L	P340939	
		Endrin Ketone	2.2	U	ng/L	P340939	
		Dicofol	33	U	ng/L	P340939	

Field ID: G1SW0046

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970908	EPA 8276	Chlordane**	2.8	U	ng/L	P340939	
		Toxaphene**	33	U	ng/L	P340939	
1970910	EPA 8270D	Alachlor	0.24	U	ng/L	P340974	
		Ametryn	3.0		ng/L	P340974	
		Atrazine	230		ng/L	P340974	
		Atrazine Desethyl	26		ng/L	P340974	
		Azinphos Methyl	2.1	U	ng/L	P340974	
		Bromacil	0.48	UJ	ng/L	P340974	LCS
		Butylate	0.38	U	ng/L	P340974	
		Chlorpyrifos Ethyl	0.40	I	ng/L	P340974	
		Chlorpyrifos Methyl	0.095	U	ng/L	P340974	
		Demeton	1.9	U	ng/L	P340974	
		Diazinon	0.12	U	ng/L	P340974	
		Disulfoton	0.48	U	ng/L	P340974	
		EPTC	1.2	U	ng/L	P340974	
		Ethion	0.14	U	ng/L	P340974	
		Ethoprop	0.095	U	ng/L	P340974	
		Fenamiphos	0.24	U	ng/L	P340974	
		Fipronil	0.26	I	ng/L	P340974	
		Fipronil Sulfide	0.86		ng/L	P340974	
		Fipronil Sulfone	1.2		ng/L	P340974	
		Hexazinone	25	J	ng/L	P340974	
		Malathion	0.33	U	ng/L	P340974	
		Metribuzin	0.19	UJ	ng/L	P340974	LCS, MS
		Mevinphos	0.48	U	ng/L	P340974	
		Molinate	0.29	U	ng/L	P340974	
		Norflurazon	0.48	U	ng/L	P340974	
		Pendimethalin	0.95	U	ng/L	P340974	
		Phorate	0.24	U	ng/L	P340974	
		Prometon	0.86	U	ng/L	P340974	
		Prometryn	0.19	U	ng/L	P340974	
		Simazine	1.6	I	ng/L	P340974	
		Terbufos	0.095	U	ng/L	P340974	
		Terbuthylazine	0.40	U	ng/L	P340974	
		Fonofos	0.19	U	ng/L	P340974	
		Metalaxyl	0.24	U	ng/L	P340974	
		Metolachlor	0.24	U	ng/L	P340974	
		Acetochlor	0.24	U	ng/L	P340974	
		Cyanazine	0.48	U	ng/L	P340974	
		Parathion Ethyl	0.24	U	ng/L	P340974	
		Parathion Methyl	0.24	U	ng/L	P340974	

Ref. Method and Comment:

EPA 8321B: Fenuron was detected in the method blank slightly above the MDL.

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

EPA 8270D: MS accuracy for Atrazine, Simazine and Fipronil Sulfone not assessed due to high content of these parameters in the sample spiked.

Estimated value for Hexazinone due to Internal standard recovery below control limits. Refer to the narrative for an explanation of QC Codes.

Sample Location: Thirty Mile Creek @ Nichols Rd

Collection Date/Time: 02/28/2018 09:13

Field ID: G2SW0046

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970903	EPA 8321B	2,4-D	0.0020	U	ug/L	P340782	
		Sucralose**	0.030	I	ug/L	P340834	
		Bentazon	8.0E-04	U	ug/L	P340782	MS
		MCP	0.0020	U	ug/L	P340782	MS
		Triclopyr**	0.0040	U	ug/L	P340782	MS
		Imidacloprid	0.0020	U	ug/L	P340782	
		Diuron	0.0020	U	ug/L	P340782	
		Primidone**	0.0040	U	ug/L	P340782	
		Linuron	0.0040	U	ug/L	P340782	
		Acetaminophen**	0.0080	U	ug/L	P340782	
		Fenuron	0.0080	U	ug/L	P340782	
		Imazapyr**	0.12		ug/L	P340782	MS
		Carbamazepine**	4.0E-04	U	ug/L	P340782	
		Fluridone**	8.0E-04	U	ug/L	P340782	

Ref. Method and Comment:
EPA 8321B: Fenuron was detected in the method blank slightly above the MDL.

Sample Location: Thirty Mile Crk @ Train Tracks Mosaic

Collection Date/Time: 02/28/2018 11:25

Field ID: G2SW0047

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970904	EPA 8321B	2,4-D	0.0020	U	ug/L	P340782	
		Sucralose**	0.11		ug/L	P340834	
		Bentazon	8.0E-04	U	ug/L	P340782	MS
		MCP	0.0020	U	ug/L	P340782	MS
		Triclopyr**	0.0040	U	ug/L	P340782	MS
		Imidacloprid	0.0020	U	ug/L	P340782	
		Diuron	0.0020	U	ug/L	P340782	
		Primidone**	0.0040	U	ug/L	P340782	
		Linuron	0.0040	U	ug/L	P340782	
		Acetaminophen**	0.0080	U	ug/L	P340782	
		Fenuron	0.0080	U	ug/L	P340782	
		Imazapyr**	0.086		ug/L	P340782	MS
		Carbamazepine**	4.0E-04	U	ug/L	P340782	
		Fluridone**	8.0E-04	U	ug/L	P340782	

Ref. Method and Comment:
EPA 8321B: Fenuron was detected in the method blank slightly above the MDL.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P340809

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P340926

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: P340926

Component	Result	Code	Units
Silver	0.010	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P341619

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341032

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341033

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P340971

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P340828

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P340887

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P340887

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P340868

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P340821

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

Reference Method: EPA 8270D
Batch ID: P340939

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 8270D
Batch ID: P340974

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D

Batch ID: P340974

Component	Result	Code	Units
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
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8276

Batch ID: P340939

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

Reference Method: EPA 8321B

Batch ID: P340705

Component	Result	Code	Units
AMPA	0.10	U	ug/L
Glyphosate	0.10	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P340782

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	0.014	I	ug/L
Fluridone	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: P340834

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P340814

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P341245

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

Reference Method: SM 2540 C-97
Batch ID: P341152

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P340935

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P341248

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P340978

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

Reference Method: SM 5310 B-00
Batch ID: P341044

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: P340926

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	103		P	85 - 115
Iron	107		P	85 - 115
Magnesium	103		P	85 - 115
Potassium	105		P	85 - 115
Sodium	103		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P340926

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Silver	98.4		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P341619

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	104		P	85 - 115
Cadmium	105		P	85 - 115
Chromium	98.8		P	85 - 115
Copper	100		P	85 - 115
Lead	101		P	85 - 115
Nickel	101		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341032

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	95.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341033

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P340971

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P340828

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P340887

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P340868

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: P340821

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

Reference Method: EPA 8270D
Batch ID: P340939

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	73.4	62.9	P/P	24 - 89.0
Alpha-BHC	95.2	83.9	P/P	58 - 117
Alpha-Chlordane	95.1	84.3	P/P	56 - 115
Beta-BHC	114	106	P/P	55 - 137
Carbophenothion	86.4	84.3	P/P	37 - 145
Chlorothalonil	132	81.6	P/P	26 - 163
Cypermethrin	94.8	84.7	P/P	42 - 156
DDD-p,p'	108	102	P/P	59 - 129
DDE-p,p'	94.3	83.6	P/P	52 - 117
DDT-p,p'	95.8	87.5	P/P	48 - 128

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P340939

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Delta-BHC	122	128	P/P	59 - 158
Dicofol	89.9	80.4	P/P	19 - 124
Dieldrin	99.8	88.8	P/P	57 - 126
Endosulfan I	91.5	86.6	P/P	59 - 133
Endosulfan II	124	116	P/P	58 - 148
Endosulfan Sulfate	116	101	P/P	56 - 135
Endrin	96.1	86.6	P/P	50 - 140
Endrin Aldehyde	101	90.5	P/P	47 - 141
Endrin Ketone	109	96.1	P/P	63 - 123
Gamma-BHC	102	89.2	P/P	59 - 132
Gamma-Chlordane	92.2	81.2	P/P	55 - 112
Heptachlor	77.1	66.5	P/P	45 - 102
Heptachlor Epoxide	96.8	85.9	P/P	61 - 116
Methoxychlor	99.8	93.2	P/P	60 - 133
Mirex	77.0	68.5	P/P	40 - 98.0
Permethrin	94.9	87.2	P/P	45 - 131
Trifluralin	81.8	73.1	P/P	38 - 179

Reference Method: EPA 8270D
Batch ID: P340974

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	93.7	97.7	P/P	74 - 119
Alachlor	95.6	100	P/P	75 - 118
Ametryn	94.2	84.6	P/P	59 - 137
Atrazine	96.6	104	P/P	73 - 120
Atrazine Desethyl	116	118	P/P	19 - 129
Azinphos Methyl	113	118	P/P	65 - 181
Bromacil	39.3	52.1	F/P	43 - 123
Butylate	63.3	61.2	P/P	28 - 85.0
Chlorpyrifos Ethyl	91.8	99.7	P/P	55 - 112
Chlorpyrifos Methyl	98.1	105	P/P	35 - 124
Cyanazine	252	253	P/P	26 - 262
Demeton	75.2	90.8	P/P	43 - 122
Diazinon	98.4	103	P/P	72 - 120
Disulfoton	78.2	95.0	P/P	45 - 137
EPTC	61.4	60.1	P/P	28 - 95.0
Ethion	87.8	86.4	P/P	63 - 127
Ethoprop	97.9	102	P/P	63 - 109
Fenamiphos	94.8	102	P/P	66 - 136
Fipronil	96.1	102	P/P	63 - 126
Fipronil Sulfide	93.8	102	P/P	59 - 123
Fipronil Sulfone	88.6	94.6	P/P	56 - 122
Fonofos	94.7	98.6	P/P	64 - 114
Hexazinone	110	118	P/P	49 - 144
Malathion	91.6	95.0	P/P	68 - 131
Metalaxyl	94.3	101	P/P	57 - 126
Metolachlor	95.9	101	P/P	75 - 118
Metribuzin	169	189	P/F	46 - 169
Mevinphos	84.5	88.9	P/P	34 - 126
Molinate	67.0	67.9	P/P	37 - 101
Norflurazon	90.3	95.1	P/P	63 - 127

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270D

Batch ID: P340974

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Parathion Ethyl	92.0	98.5	P/P	78 - 109
Parathion Methyl	100	104	P/P	74 - 123
Pendimethalin	104	112	P/P	51 - 130
Phorate	84.4	92.3	P/P	53 - 116
Prometon	87.4	92.2	P/P	66 - 124
Prometryn	93.9	100	P/P	66 - 124
Simazine	105	110	P/P	62 - 134
Terbufos	90.3	98.6	P/P	59 - 115
Terbutylazine	96.3	103	P/P	76 - 113

Reference Method: EPA 8276

Batch ID: P340939

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	79.1	66.7	P/P	47 - 125
Toxaphene	87.8	81.2	P/P	46 - 147

Reference Method: EPA 8321B

Batch ID: P340705

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
AMPA	115		P	40 - 150
Glyphosate	111		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P340782

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	82.6		P	40 - 150
3-Hydroxycarbofuran	92.4		P	40 - 150
Acetaminophen	98.1		P	30 - 150
Aldicarb	67.9		P	30 - 150
Aldicarb Sulfone	105		P	40 - 150
Aldicarb Sulfoxide	114		P	40 - 150
Bentazon	90.2		P	30 - 150
Carbamazepine	65.4		P	40 - 150
Carbaryl	61.8		P	40 - 150
Carbofuran	52.7		P	40 - 150
Diuron	66.5		P	40 - 150
Fenuron	96.3		P	40 - 150
Fluridone	82.1		P	40 - 150
Imazapyr	73.5		P	40 - 150
Imidacloprid	90.1		P	40 - 160
Linuron	71.9		P	40 - 150
MCPP	78.0		P	40 - 150
Methiocarb	63.7		P	40 - 150
Methomyl	103		P	40 - 150
Oxamyl	94.5		P	40 - 150
Primidone	108		P	40 - 150
Propoxur	44.3		P	40 - 150
Pyraclostrobin	61.6		P	40 - 150
Triclopyr	74.3		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P340834

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	116		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P341245

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P341248

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.9		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P340978

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.9		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P341044

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	93.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P340926

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970525	Calcium	102		P	80 - 120
1970525	Iron	106		P	80 - 120
1970525	Magnesium	102		P	80 - 120
1970525	Potassium	103		P	80 - 120
1970525	Sodium	102		P	80 - 120
1970525	Zinc	99.5		P	80 - 120
1970841	Calcium	107		P	80 - 120
1970841	Iron	108	110	P/P	80 - 120
1970841	Magnesium	109		P	80 - 120
1970841	Potassium	103	106	P/P	80 - 120
1970841	Sodium	106		P	80 - 120
1970841	Zinc	102	102	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P340926

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970525	Silver	97.9		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P340926

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970841	Silver	99.8	98.3	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P341619

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970527	Arsenic	104	102	P/P	80 - 120
1970527	Cadmium	105	106	P/P	80 - 120
1970527	Chromium	99.9	98.5	P/P	80 - 120
1970527	Copper	97.0	100	P/P	80 - 120
1970527	Lead	103	103	P/P	80 - 120
1970527	Nickel	98.7	97.1	P/P	80 - 120
1970913	Arsenic	106		P	80 - 120
1970913	Cadmium	105		P	80 - 120
1970913	Chromium	98.5		P	80 - 120
1970913	Copper	101		P	80 - 120
1970913	Lead	105		P	80 - 120
1970913	Nickel	99.1		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341032

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970943	Chloride	93.2		P	90 - 110
1970950	Chloride	96.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341033

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970943	Sulfate	96.1		P	90 - 110
1970950	Sulfate	96.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P340971

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970793	Ammonia-N	99.7	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P340828

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970879	Kjeldahl Nitrogen	100	98.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P340887

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970961	NO2NO3-N	104	104	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P340821

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970797	O-Phosphate-P	97.2	97.9	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P340939

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1971343	Aldrin	71.3	59.5	P/P	26 - 96.0
1971343	Alpha-BHC	84.1	74.6	P/P	51 - 123
1971343	Alpha-Chlordane	92.3	77.1	P/P	45 - 120
1971343	Beta-BHC	94.6	97.4	P/P	43 - 146
1971343	Carbophenothion	140	98.2	P/P	26 - 179
1971343	Chlorothalonil	182	108	P/P	10 - 215
1971343	Cypermethrin	95.9	81.2	P/P	35 - 169
1971343	DDD-p,p'	105	87.8	P/P	49 - 131
1971343	DDE-p,p'	84.7	77.1	P/P	39 - 127
1971343	DDT-p,p'	89.4	75.2	P/P	49 - 120
1971343	Delta-BHC	113	111	P/P	49 - 187
1971343	Dicofol	81.3	75.8	P/P	10 - 129
1971343	Dieldrin	92.3	79.0	P/P	46 - 132
1971343	Endosulfan I	116	78.6	P/P	57 - 130
1971343	Endosulfan II	141	99.3	P/P	52 - 148
1971343	Endosulfan Sulfate	106	93.5	P/P	55 - 129
1971343	Endrin	93.7	73.7	P/P	45 - 133
1971343	Endrin Aldehyde	14.3	64.4	F/P	26 - 140
1971343	Endrin Ketone	102	89.3	P/P	60 - 125
1971343	Gamma-BHC	103	82.4	P/P	50 - 145
1971343	Gamma-Chlordane	90.9	75.8	P/P	44 - 118
1971343	Heptachlor	74.8	61.4	P/P	35 - 106
1971343	Heptachlor Epoxide	93.9	79.3	P/P	52 - 123
1971343	Methoxychlor	92.5	81.0	P/P	54 - 132
1971343	Mirex	76.8	66.4	P/P	36 - 107
1971343	Permethrin	97.5	87.8	P/P	47 - 135
1971343	Trifluralin	77.2	66.9	P/P	32 - 228

Reference Method: EPA 8270D
Batch ID: P340974

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970458	Acetochlor	100	92.9	P/P	67 - 125
1970458	Alachlor	100	97.8	P/P	69 - 123
1970458	Ametryn	109	107	P/P	52 - 151
1970458	Atrazine Desethyl	124	112	P/P	10 - 129
1970458	Azinphos Methyl	126	101	P/P	48 - 200
1970458	Bromacil	94.6	81.2	P/P	46 - 130
1970458	Butylate	70.1	58.3	P/P	10 - 85.0
1970458	Chlorpyrifos Ethyl	102	93.7	P/P	54 - 115
1970458	Chlorpyrifos Methyl	109	99.8	P/P	44 - 117
1970458	Cyanazine	234	209	P/P	10 - 262
1970458	Demeton	82.0	79.5	P/P	24 - 145
1970458	Diazinon	109	102	P/P	66 - 129
1970458	Disulfoton	88.9	81.2	P/P	45 - 139
1970458	EPTC	69.5	57.2	P/P	10 - 86.0

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P340974

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970458	Ethion	89.9	83.7	P/P	59 - 133
1970458	Ethoprop	113	102	P/P	54 - 116
1970458	Fenamiphos	102	87.9	P/P	55 - 140
1970458	Fipronil	106	92.9	P/P	37 - 142
1970458	Fipronil Sulfide	108	94.4	P/P	37 - 130
1970458	Fonofos	107	96.7	P/P	55 - 118
1970458	Hexazinone	110	107	P/P	62 - 140
1970458	Malathion	106	92.8	P/P	64 - 132
1970458	Metalaxyl	107	93.7	P/P	55 - 129
1970458	Metolachlor	102	95.3	P/P	56 - 137
1970458	Metribuzin	227	215	F/P	16 - 218
1970458	Mevinphos	101	85.2	P/P	34 - 129
1970458	Molinate	74.3	63.1	P/P	16 - 99.0
1970458	Norflurazon	100	88.4	P/P	43 - 135
1970458	Parathion Ethyl	104	94.5	P/P	71 - 112
1970458	Parathion Methyl	114	101	P/P	65 - 127
1970458	Pendimethalin	120	112	P/P	35 - 159
1970458	Phorate	97.2	89.3	P/P	41 - 129
1970458	Prometon	102	95.7	P/P	56 - 140
1970458	Prometryn	101	95.7	P/P	65 - 130
1970458	Terbufos	104	95.1	P/P	53 - 126
1970458	Terbutylazine	106	100	P/P	73 - 114

Reference Method: EPA 8276
Batch ID: P340939

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1971482	Chlordane	76.9	73.8	P/P	41 - 134
1971482	Toxaphene	84.6	80.1	P/P	39 - 158

Reference Method: EPA 8321B
Batch ID: P340705

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970290	AMPA	109	104	P/P	40 - 150
1970290	Glyphosate	111	113	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P340782

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970898	2,4-D	49.0	50.3	P/P	40 - 150
1970898	3-Hydroxycarbofuran	100	102	P/P	40 - 150
1970898	Acetaminophen	112	125	P/P	30 - 150
1970898	Aldicarb	63.9	71.5	P/P	30 - 150
1970898	Aldicarb Sulfone	120	124	P/P	40 - 150
1970898	Aldicarb Sulfoxide	102	108	P/P	40 - 150
1970898	Bentazon	26.3	27.1	F/F	30 - 150
1970898	Carbamazepine	75.8	76.1	P/P	40 - 150
1970898	Carbaryl	55.3	56.6	P/P	40 - 150
1970898	Carbofuran	58.3	48.5	P/P	40 - 150
1970898	Diuron	60.6	63.4	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P340782

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970898	Fenuron	81.7	86.9	P/P	40 - 150
1970898	Fluridone	71.0	78.3	P/P	40 - 150
1970898	Imazapyr	39.2	50.0	F/P	40 - 150
1970898	Imidacloprid	134	149	P/P	40 - 160
1970898	Linuron	71.3	74.0	P/P	40 - 150
1970898	MCCP	35.5	34.3	F/F	40 - 150
1970898	Methiocarb	63.5	70.2	P/P	40 - 150
1970898	Methomyl	86.3	87.7	P/P	40 - 150
1970898	Oxamyl	85.6	88.1	P/P	40 - 150
1970898	Primidone	112	111	P/P	40 - 150
1970898	Propoxur	50.8	42.9	P/P	40 - 150
1970898	Pyraclostrobin	58.9	60.6	P/P	40 - 150
1970898	Triclopyr	40.9	38.6	P/F	40 - 150

Reference Method: EPA 8321B
Batch ID: P340834

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970856	Sucralose	121	124	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P341248

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970876	Fluoride	96.9	95.4	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P340978

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970711	Organic Carbon	98.6	98.4	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P341044

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970879	Organic Carbon	93.9	94.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P340809

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970876	Turbidity	1.54	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P340926

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970841	Calcium	0.282	Spike	P	0 - 20
1970841	Iron	1.08	Spike	P	0 - 20
1970841	Magnesium	0.255	Spike	P	0 - 20
1970841	Potassium	1.36	Spike	P	0 - 20
1970841	Sodium	0.198	Spike	P	0 - 20
1970841	Zinc	0.0450	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P340926

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970841	Silver	1.46	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P341619

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970527	Arsenic	1.34	Spike	P	0 - 20
1970527	Cadmium	1.33	Spike	P	0 - 20
1970527	Chromium	1.42	Spike	P	0 - 20
1970527	Copper	3.37	Spike	P	0 - 20
1970527	Lead	0.461	Spike	P	0 - 20
1970527	Nickel	1.64	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341032

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970943	Chloride	1.65	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341033

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970943	Sulfate	1.53	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P340971

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970793	Ammonia-N	0.482	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P340828

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970879	Kjeldahl Nitrogen	1.04	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P340887

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970961	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P340868

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970874	Total-P	1.87	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P340821

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970797	O-Phosphate-P	0.718	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P340939

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971343	Aldrin	18.1	Spike	P	0 - 30
1971343	Alpha-BHC	12.0	Spike	P	0 - 30
1971343	Alpha-Chlordane	17.9	Spike	P	0 - 30
1971343	Beta-BHC	2.87	Spike	P	0 - 30
1971343	Carbophenothion	35.0	Spike	F	0 - 30
1971343	Chlorothalonil	50.8	Spike	F	0 - 30
1971343	Cypermethrin	16.6	Spike	P	0 - 30
1971343	DDD-p,p'	17.7	Spike	P	0 - 30
1971343	DDE-p,p'	9.46	Spike	P	0 - 30
1971343	DDT-p,p'	17.2	Spike	P	0 - 30
1971343	Delta-BHC	1.85	Spike	P	0 - 30
1971343	Dicofol	6.94	Spike	P	0 - 30
1971343	Dieldrin	11.2	Spike	P	0 - 30
1971343	Endosulfan I	38.5	Spike	F	0 - 30
1971343	Endosulfan II	34.5	Spike	F	0 - 30
1971343	Endosulfan Sulfate	12.9	Spike	P	0 - 30
1971343	Endrin	23.9	Spike	P	0 - 30
1971343	Endrin Aldehyde	127	Spike	F	0 - 30
1971343	Endrin Ketone	12.8	Spike	P	0 - 30
1971343	Gamma-BHC	22.0	Spike	P	0 - 30
1971343	Gamma-Chlordane	18.1	Spike	P	0 - 30
1971343	Heptachlor	19.8	Spike	P	0 - 30
1971343	Heptachlor Epoxide	14.3	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P340939

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971343	Methoxychlor	13.2	Spike	P	0 - 30
1971343	Mirex	14.5	Spike	P	0 - 30
1971343	Permethrin	10.5	Spike	P	0 - 30
1971343	Trifluralin	14.4	Spike	P	0 - 30
LFB	Aldrin	15.4	LCS	P	0 - 30
LFB	Alpha-BHC	12.5	LCS	P	0 - 30
LFB	Alpha-Chlordane	12.1	LCS	P	0 - 30
LFB	Beta-BHC	7.23	LCS	P	0 - 30
LFB	Carbophenothion	2.43	LCS	P	0 - 30
LFB	Chlorothalonil	47.2	LCS	F	0 - 30
LFB	Cypermethrin	11.3	LCS	P	0 - 30
LFB	DDD-p,p'	5.63	LCS	P	0 - 30
LFB	DDE-p,p'	12.0	LCS	P	0 - 30
LFB	DDT-p,p'	9.12	LCS	P	0 - 30
LFB	Delta-BHC	5.54	LCS	P	0 - 30
LFB	Dicofol	11.2	LCS	P	0 - 30
LFB	Dieldrin	11.7	LCS	P	0 - 30
LFB	Endosulfan I	5.50	LCS	P	0 - 30
LFB	Endosulfan II	6.38	LCS	P	0 - 30
LFB	Endosulfan Sulfate	13.7	LCS	P	0 - 30
LFB	Endrin	10.4	LCS	P	0 - 30
LFB	Endrin Aldehyde	11.0	LCS	P	0 - 30
LFB	Endrin Ketone	13.0	LCS	P	0 - 30
LFB	Gamma-BHC	13.2	LCS	P	0 - 30
LFB	Gamma-Chlordane	12.7	LCS	P	0 - 30
LFB	Heptachlor	14.9	LCS	P	0 - 30
LFB	Heptachlor Epoxide	11.9	LCS	P	0 - 30
LFB	Methoxychlor	6.90	LCS	P	0 - 30
LFB	Mirex	11.7	LCS	P	0 - 30
LFB	Permethrin	8.47	LCS	P	0 - 30
LFB	Trifluralin	11.2	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P340974

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970458	Acetochlor	7.74	Spike	P	0 - 30
1970458	Alachlor	2.45	Spike	P	0 - 30
1970458	Ametryn	1.60	Spike	P	0 - 30
1970458	Atrazine	11.0	Spike	P	0 - 30
1970458	Atrazine Desethyl	7.47	Spike	P	0 - 30
1970458	Azinphos Methyl	21.5	Spike	P	0 - 30
1970458	Bromacil	10.3	Spike	P	0 - 30
1970458	Butylate	18.3	Spike	P	0 - 30
1970458	Chlorpyrifos Ethyl	8.41	Spike	P	0 - 30
1970458	Chlorpyrifos Methyl	8.44	Spike	P	0 - 30
1970458	Cyanazine	11.3	Spike	P	0 - 30
1970458	Demeton	3.09	Spike	P	0 - 30
1970458	Diazinon	6.86	Spike	P	0 - 30
1970458	Disulfoton	9.02	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P340974

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970458	EPTC	19.4	Spike	P	0 - 30
1970458	Ethion	7.24	Spike	P	0 - 30
1970458	Ethoprop	9.87	Spike	P	0 - 30
1970458	Fenamiphos	15.3	Spike	P	0 - 30
1970458	Fipronil	10.9	Spike	P	0 - 30
1970458	Fipronil Sulfide	9.95	Spike	P	0 - 30
1970458	Fipronil Sulfone	12.3	Spike	P	0 - 30
1970458	Fonofos	10.2	Spike	P	0 - 30
1970458	Hexazinone	2.85	Spike	P	0 - 30
1970458	Malathion	12.9	Spike	P	0 - 30
1970458	Metalaxyl	12.9	Spike	P	0 - 30
1970458	Metolachlor	6.53	Spike	P	0 - 30
1970458	Metribuzin	5.67	Spike	P	0 - 30
1970458	Mevinphos	16.7	Spike	P	0 - 30
1970458	Molinate	16.3	Spike	P	0 - 30
1970458	Norflurazon	12.6	Spike	P	0 - 30
1970458	Parathion Ethyl	9.65	Spike	P	0 - 30
1970458	Parathion Methyl	12.7	Spike	P	0 - 30
1970458	Pendimethalin	6.31	Spike	P	0 - 30
1970458	Phorate	8.56	Spike	P	0 - 30
1970458	Prometon	6.41	Spike	P	0 - 30
1970458	Prometryn	5.13	Spike	P	0 - 30
1970458	Simazine	8.31	Spike	P	0 - 30
1970458	Terbufos	8.51	Spike	P	0 - 30
1970458	Terbutylazine	5.72	Spike	P	0 - 30
LFB	Acetochlor	4.16	LCS	P	0 - 30
LFB	Alachlor	4.82	LCS	P	0 - 30
LFB	Ametryn	10.8	LCS	P	0 - 30
LFB	Atrazine	7.49	LCS	P	0 - 30
LFB	Atrazine Desethyl	1.96	LCS	P	0 - 30
LFB	Azinphos Methyl	4.84	LCS	P	0 - 30
LFB	Bromacil	27.9	LCS	P	0 - 30
LFB	Butylate	3.39	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	8.17	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	6.89	LCS	P	0 - 30
LFB	Cyanazine	0.141	LCS	P	0 - 30
LFB	Demeton	18.8	LCS	P	0 - 30
LFB	Diazinon	4.70	LCS	P	0 - 30
LFB	Disulfoton	19.4	LCS	P	0 - 30
LFB	EPTC	2.08	LCS	P	0 - 30
LFB	Ethion	1.60	LCS	P	0 - 30
LFB	Ethoprop	4.19	LCS	P	0 - 30
LFB	Fenamiphos	6.93	LCS	P	0 - 30
LFB	Fipronil	5.79	LCS	P	0 - 30
LFB	Fipronil Sulfide	8.21	LCS	P	0 - 30
LFB	Fipronil Sulfone	6.53	LCS	P	0 - 30
LFB	Fonofos	4.02	LCS	P	0 - 30
LFB	Hexazinone	6.69	LCS	P	0 - 30
LFB	Malathion	3.73	LCS	P	0 - 30
LFB	Metalaxyl	7.06	LCS	P	0 - 30
LFB	Metolachlor	4.98	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P340974

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Metribuzin	11.2	LCS	P	0 - 30
LFB	Mevinphos	5.03	LCS	P	0 - 30
LFB	Molinate	1.26	LCS	P	0 - 30
LFB	Norflurazon	5.21	LCS	P	0 - 30
LFB	Parathion Ethyl	6.78	LCS	P	0 - 30
LFB	Parathion Methyl	3.80	LCS	P	0 - 30
LFB	Pendimethalin	6.99	LCS	P	0 - 30
LFB	Phorate	9.03	LCS	P	0 - 30
LFB	Prometon	5.37	LCS	P	0 - 30
LFB	Prometryn	6.53	LCS	P	0 - 30
LFB	Simazine	4.33	LCS	P	0 - 30
LFB	Terbufos	8.77	LCS	P	0 - 30
LFB	Terbutylazine	6.32	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P340939

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971482	Chlordane	4.05	Spike	P	0 - 30
1971482	Toxaphene	5.48	Spike	P	0 - 30
LFB	Chlordane	16.9	LCS	P	0 - 30
LFB	Toxaphene	7.91	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P340705

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970290	AMPA	4.46	Spike	P	0 - 30
1970290	Glyphosate	1.95	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P340782

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970898	2,4-D	2.52	Spike	P	0 - 30
1970898	3-Hydroxycarbofuran	1.89	Spike	P	0 - 30
1970898	Acetaminophen	11.1	Spike	P	0 - 30
1970898	Aldicarb	11.2	Spike	P	0 - 30
1970898	Aldicarb Sulfone	3.98	Spike	P	0 - 30
1970898	Aldicarb Sulfoxide	5.58	Spike	P	0 - 30
1970898	Bentazon	2.14	Spike	P	0 - 30
1970898	Carbamazepine	0.401	Spike	P	0 - 30
1970898	Carbaryl	2.24	Spike	P	0 - 30
1970898	Carbofuran	18.3	Spike	P	0 - 30
1970898	Diuron	4.09	Spike	P	0 - 30
1970898	Fenuron	6.22	Spike	P	0 - 30
1970898	Fluridone	8.96	Spike	P	0 - 30
1970898	Imazapyr	9.78	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P340782

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970898	Imidacloprid	9.13	Spike	P	0 - 30
1970898	Linuron	3.60	Spike	P	0 - 30
1970898	MCPP	3.43	Spike	P	0 - 30
1970898	Methiocarb	10.1	Spike	P	0 - 30
1970898	Methomyl	1.69	Spike	P	0 - 30
1970898	Oxamyl	2.94	Spike	P	0 - 30
1970898	Primidone	0.955	Spike	P	0 - 30
1970898	Propoxur	17.0	Spike	P	0 - 30
1970898	Pyraclostrobin	2.89	Spike	P	0 - 30
1970898	Triclopyr	5.78	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P340834

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970856	Sucralose	1.93	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P340814

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970786	Color (true)	1.13	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P341245

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970876	Total Alkalinity	0.128	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P341152

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970873	TDS	0.315	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P341248

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970876	Fluoride	0.960	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P340978

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

Reference Method: SM 5310 B-00
Batch ID: P340978

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970711	Organic Carbon	0.224	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P341044

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970879	Organic Carbon	0.516	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: 1970897
Field Sample ID: G2SW0045

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	57.4	P	30 - 160

Lab Sample ID: 1970898
Field Sample ID: G2SW0045

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	54.9	P	30 - 160
EPA 8321B	2,4-D-d3	54.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	139	P	30 - 160
EPA 8321B	Acetaminophen-d4	139	P	30 - 160
EPA 8321B	Carbamazepine-d10	94.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	94.0	P	30 - 160
EPA 8321B	Diuron-d6	68.3	P	30 - 160
EPA 8321B	Diuron-d6	68.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	123	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	123	P	40 - 160
EPA 8321B	Primidone-d5	113	P	30 - 160
EPA 8321B	Primidone-d5	113	P	30 - 160
EPA 8321B	Sucralose-d6	120	P	40 - 160

Lab Sample ID: 1970899
Field Sample ID: G1SW0066

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	42.7	P	30 - 160

Lab Sample ID: 1970900
Field Sample ID: G1SW0046

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	46.2	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1970901
Field Sample ID: G1SW0066

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	48.1	P	30 - 160
EPA 8321B	2,4-D-d3	48.1	P	30 - 160
EPA 8321B	Acetaminophen-d4	127	P	30 - 160
EPA 8321B	Acetaminophen-d4	127	P	30 - 160
EPA 8321B	Carbamazepine-d10	76.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	76.1	P	30 - 160
EPA 8321B	Diuron-d6	60.1	P	30 - 160
EPA 8321B	Diuron-d6	60.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	98.1	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	98.1	P	40 - 160
EPA 8321B	Primidone-d5	105	P	30 - 160
EPA 8321B	Primidone-d5	105	P	30 - 160
EPA 8321B	Sucralose-d6	135	P	40 - 160

Lab Sample ID: 1970902
Field Sample ID: G1SW0046

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	52.0	P	30 - 160
EPA 8321B	2,4-D-d3	52.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	145	P	30 - 160
EPA 8321B	Acetaminophen-d4	145	P	30 - 160
EPA 8321B	Carbamazepine-d10	87.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	87.7	P	30 - 160
EPA 8321B	Diuron-d6	65.9	P	30 - 160
EPA 8321B	Diuron-d6	65.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	99.3	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	99.3	P	40 - 160
EPA 8321B	Primidone-d5	112	P	30 - 160
EPA 8321B	Primidone-d5	112	P	30 - 160
EPA 8321B	Sucralose-d6	133	P	40 - 160

Lab Sample ID: 1970903
Field Sample ID: G2SW0046

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	46.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	142	P	30 - 160
EPA 8321B	Carbamazepine-d10	80.7	P	30 - 160
EPA 8321B	Diuron-d6	57.0	P	30 - 160
EPA 8321B	Primidone-d5	109	P	30 - 160
EPA 8321B	Sucralose-d6	126	P	40 - 160

Lab Sample ID: 1970904
Field Sample ID: G2SW0047

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	50.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	149	P	30 - 160
EPA 8321B	Carbamazepine-d10	88.7	P	30 - 160
EPA 8321B	Diuron-d6	65.6	P	30 - 160
EPA 8321B	Primidone-d5	119	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1970904
Field Sample ID: G2SW0047

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	133	P	40 - 160

Lab Sample ID: 1970905
Field Sample ID: G2SW0045

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	65.7	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	52.0	P	34 - 101
EPA 8276	Decachlorobiphenyl	56.1	P	31 - 108
EPA 8276	PCNB	112	P	62 - 142

Lab Sample ID: 1970906
Field Sample ID: G2SW0045

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	124	P	71 - 126
EPA 8270D	Terbufos-d10	111	P	50 - 130

Lab Sample ID: 1970907
Field Sample ID: G1SW0066

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	79.0	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	56.5	P	34 - 101
EPA 8276	Decachlorobiphenyl	68.6	P	31 - 108
EPA 8276	PCNB	134	P	62 - 142

Lab Sample ID: 1970908
Field Sample ID: G1SW0046

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	67.5	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	50.6	P	34 - 101
EPA 8276	Decachlorobiphenyl	58.7	P	31 - 108
EPA 8276	PCNB	121	P	62 - 142

Lab Sample ID: 1970909
Field Sample ID: G1SW0066

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	113	P	71 - 126
EPA 8270D	Terbufos-d10	108	P	50 - 130

Lab Sample ID: 1970910
Field Sample ID: G1SW0046

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	119	P	71 - 126
EPA 8270D	Terbufos-d10	111	P	50 - 130

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A82364

Included Lab Sample IDs: 1970898, 1970901, 1970902

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	88.4	87.0	P/P	60 - 150
Glyphosate	93.4	112	P/P	60 - 150

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A82369

Included Lab Sample IDs: 1970873, 1970876, 1970877

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	99.5	P/P	95 - 105

Reference Method: SM 2120 B

Run ID: A82370

Included Lab Sample IDs: 1970873, 1970876, 1970877

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.6	98.9	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A82372

Included Lab Sample IDs: 1970875, 1970880, 1970881

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A82408

Included Lab Sample IDs: 1970874, 1970878, 1970879

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	100	P/P	90 - 110
NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A82414

Included Lab Sample IDs: 1970898, 1970901, 1970902, 1970903, 1970904

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	112	102	P/P	60 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A82419

Included Lab Sample IDs: 1970874, 1970878, 1970879

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	99.6	P/P	90 - 110
Total-P	99.4	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A82430

Included Lab Sample IDs: 1970874, 1970878, 1970879

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	104	106	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A82435

Included Lab Sample IDs: 1970874, 1970878

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.8	96.3	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A82436

Included Lab Sample IDs: 1970898, 1970901, 1970902, 1970903, 1970904

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	102	108	P/P	50 - 150
2,4-D	95.7	93.1	P/P	50 - 150
3-Hydroxycarbofuran	111	106	P/P	60 - 150
Acetaminophen	102	108	P/P	60 - 150
Acetaminophen	107	95.9	P/P	60 - 150
Acetaminophen	95.9	102	P/P	60 - 150
Aldicarb	129	116	P/P	60 - 150
Aldicarb Sulfone	111	104	P/P	50 - 150
Aldicarb Sulfoxide	99.8	102	P/P	50 - 150
Bentazon	106	115	P/P	50 - 150
Bentazon	108	88.3	P/P	50 - 150
Carbamazepine	100	104	P/P	60 - 150
Carbamazepine	104	109	P/P	60 - 150
Carbamazepine	109	95.6	P/P	60 - 150
Carbaryl	103	116	P/P	60 - 150
Carbofuran	80.7	111	P/P	50 - 150
Diuron	102	124	P/P	60 - 150
Diuron	124	126	P/P	60 - 150
Diuron	126	104	P/P	60 - 150
Fenuron	103	103	P/P	60 - 150
Fenuron	103	103	P/P	60 - 150
Fenuron	103	102	P/P	60 - 150
Fluridone	111	116	P/P	60 - 160
Fluridone	120	111	P/P	60 - 160
Fluridone	124	120	P/P	60 - 160
Imazapyr	105	94.6	P/P	50 - 150
Imazapyr	110	116	P/P	50 - 150
Imazapyr	116	105	P/P	50 - 150
Imidacloprid	102	111	P/P	60 - 150
Imidacloprid	104	105	P/P	60 - 150
Imidacloprid	111	104	P/P	60 - 150
Linuron	100	108	P/P	60 - 150
Linuron	105	101	P/P	60 - 150
Linuron	108	105	P/P	60 - 150
MCPP	100	85.3	P/P	50 - 150
MCPP	86.9	99.6	P/P	50 - 150
Methiocarb	101	102	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A82436

Included Lab Sample IDs: 1970897, 1970899, 1970900

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Methomyl	109	96.0	P/P	50 - 150
Oxamyl	108	101	P/P	50 - 150
Primidone	106	109	P/P	60 - 150
Primidone	114	106	P/P	60 - 150
Primidone	123	114	P/P	60 - 150
Propoxur	78.4	102	P/P	50 - 150
Pyraclostrobin	85.9	78.6	P/P	60 - 150
Pyraclostrobin	90.4	85.9	P/P	60 - 150
Triclopyr	85.4	102	P/P	50 - 150
Triclopyr	90.6	86.1	P/P	50 - 150

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A82456

Included Lab Sample IDs: 1970874, 1970878, 1970879

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A82457

Included Lab Sample IDs: 1970873, 1970876, 1970877

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.6	96.1	P/P	90 - 110
Sulfate	97.2	96.3	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A82470

Included Lab Sample IDs: 1970879

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.7	96.6	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A82511

Included Lab Sample IDs: 1970911, 1970912, 1970913

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A82512

Included Lab Sample IDs: 1970911, 1970912, 1970913

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

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-97

Run ID: A82513

Included Lab Sample IDs: 1970873, 1970876, 1970877

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	99.6	P/P	90 - 110
Total Alkalinity	98.2	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A82513

Included Lab Sample IDs: 1970873, 1970876, 1970877

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	109	104	P/P	90 - 110
Fluoride	97.1	109	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A82593

Included Lab Sample IDs: 1970905, 1970907, 1970908

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	101		P	80 - 120
Toxaphene	104		P	80 - 120

Reference Method: EPA 8270D

Run ID: A82659

Included Lab Sample IDs: 1970905, 1970907, 1970908

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	101		P	80 - 120
Alpha-BHC	101		P	80 - 120
Alpha-Chlordane	100		P	80 - 120
Beta-BHC	90.3		P	80 - 120
Carbophenothion	84.4		P	80 - 120
Chlorothalonil	99.2		P	80 - 120
Cypermethrin	82.7		P	80 - 120
DDD-p,p'	99.9		P	80 - 120
DDE-p,p'	101		P	80 - 120
DDT-p,p'	106		P	80 - 120
Delta-BHC	97.0		P	80 - 120
Dicofol	102		P	80 - 120
Dieldrin	101		P	80 - 120
Endosulfan I	93.7		P	80 - 120
Endosulfan II	107		P	80 - 120
Endosulfan Sulfate	94.9		P	80 - 120
Endrin	102		P	80 - 120
Endrin Aldehyde	93.7		P	80 - 120
Endrin Ketone	92.8		P	80 - 120
Gamma-BHC	98.5		P	80 - 120
Gamma-Chlordane	99.3		P	80 - 120
Heptachlor	97.2		P	80 - 120
Heptachlor Epoxide	99.8		P	80 - 120
Methoxychlor	103		P	80 - 120
Mirex	97.6		P	80 - 120
Permethrin	92.3		P	80 - 120
Trifluralin	99.0		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A82686

Included Lab Sample IDs: 1970906, 1970909, 1970910

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	99.0		P	80 - 120
Alachlor	101		P	80 - 120
Ametryn	95.8		P	80 - 120
Atrazine	93.0		P	80 - 120
Atrazine Desethyl	97.6		P	80 - 120
Azinphos Methyl	101		P	80 - 120
Bromacil	97.9		P	80 - 120
Butylate	97.2		P	80 - 120
Chlorpyrifos Ethyl	97.5		P	80 - 120
Chlorpyrifos Methyl	98.6		P	80 - 120
Cyanazine	103		P	80 - 120
Demeton	95.1		P	80 - 120
Diazinon	97.3		P	80 - 120
Disulfoton	95.7		P	80 - 120
EPTC	98.7		P	80 - 120
Ethion	93.3		P	80 - 120
Ethoprop	101		P	80 - 120
Fenamiphos	97.8		P	80 - 120
Fipronil	96.0		P	80 - 120
Fipronil Sulfide	96.4		P	80 - 120
Fipronil Sulfone	95.0		P	80 - 120
Fonofos	97.6		P	80 - 120
Hexazinone	93.2		P	80 - 120
Malathion	99.5		P	80 - 120
Metalaxyl	100		P	80 - 120
Metolachlor	104		P	80 - 120
Metribuzin	103		P	80 - 120
Mevinphos	96.6		P	80 - 120
Molinate	98.4		P	80 - 120
Norflurazon	96.5		P	80 - 120
Parathion Ethyl	91.9		P	80 - 120
Parathion Methyl	94.2		P	80 - 120
Pendimethalin	99.1		P	80 - 120
Phorate	95.4		P	80 - 120
Prometon	97.9		P	80 - 120
Prometryn	101		P	80 - 120
Simazine	96.3		P	80 - 120
Terbufos	97.2		P	80 - 120
Terbuthylazine	98.6		P	80 - 120

Reference Method: EPA 8270D

Run ID: A82725

Included Lab Sample IDs: 1970909, 1970910

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	92.7		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A82829

Included Lab Sample IDs: 1970911, 1970912, 1970913

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	99.7	98.7	P/P	90 - 110
Cadmium	98.0	96.9	P/P	90 - 110
Chromium	93.2	91.9	P/P	90 - 110
Lead	98.1	93.4	P/P	90 - 110
Nickel	97.2	97.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A82847

Included Lab Sample IDs: 1970911, 1970912, 1970913

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	98.5	99.9	P/P	90 - 110

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							1.54	
EPA 200.7 Rev. 4.4	Calcium	103		102	107				0.282
	Iron	107		106	108	110			1.08
	Magnesium	103		102	109				0.255
	Potassium	105		103	103	106			1.36
	Sodium	103		102	106				0.198
	Zinc	101		99.5	102	102			0.0450
EPA 200.8 Rev. 5.4	Arsenic	104		104	102	106			1.34
	Cadmium	105		105	106	105			1.33
	Chromium	98.8		99.9	98.5	98.5			1.42
	Copper	100		97.0	100	101			3.37
	Lead	101		103	103	105			0.461
	Nickel	101		98.7	97.1	99.1			1.64
	Silver	98.4		97.9	99.8	98.3			1.46
EPA 300.0 Rev. 2.1	Chloride	95.1		93.2	96.3			1.65	
	Sulfate	95.8		96.1	96.3			1.53	
EPA 350.1 Rev. 2.0	Ammonia-N	99.6		99.7	100				0.482
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.0		100	98.8				1.04
EPA 353.2 Rev. 2.0	NO2NO3-N	103		104	104				0.0
EPA 365.1 Rev. 2.0	Total-P	100							1.87
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102		97.2	97.9				0.718
EPA 8270D	Acetochlor	93.7	97.7	100	92.9		4.16		7.74
	Alachlor	95.6	100	100	97.8		4.82		2.45
	Aldrin	73.4	62.9	71.3	59.5		15.4		18.1
	Alpha-BHC	95.2	83.9	84.1	74.6		12.5		12.0
	Alpha-Chlordane	95.1	84.3	92.3	77.1		12.1		17.9
	Ametryn	94.2	84.6	109	107		10.8		1.60
	Atrazine	96.6	104				7.49		11.0

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Atrazine Desethyl	116	118	124	112	1.96	7.47
	Azinphos Methyl	113	118	126	101	4.84	21.5
	Beta-BHC	114	106	94.6	97.4	7.23	2.87
	Bromacil	39.3	52.1	94.6	81.2	27.9	10.3
	Butylate	63.3	61.2	70.1	58.3	3.39	18.3
	Carbophenothion	86.4	84.3	140	98.2	2.43	35.0
	Chlorothalonil	132	81.6	182	108	47.2	50.8
	Chlorpyrifos Ethyl	91.8	99.7	102	93.7	8.17	8.41
	Chlorpyrifos Methyl	98.1	105	109	99.8	6.89	8.44
	Cyanazine	252	253	234	209	0.141	11.3
	Cypermethrin	94.8	84.7	95.9	81.2	11.3	16.6
	DDD-p,p'	108	102	105	87.8	5.63	17.7
	DDE-p,p'	94.3	83.6	84.7	77.1	12.0	9.46
	DDT-p,p'	95.8	87.5	89.4	75.2	9.12	17.2
	Delta-BHC	122	128	113	111	5.54	1.85
	Demeton	75.2	90.8	82.0	79.5	18.8	3.09
	Diazinon	98.4	103	109	102	4.70	6.86
	Dicofol	89.9	80.4	81.3	75.8	11.2	6.94
	Dieldrin	99.8	88.8	92.3	79.0	11.7	11.2
	Disulfoton	78.2	95.0	88.9	81.2	19.4	9.02
	Endosulfan I	91.5	86.6	116	78.6	5.50	38.5
	Endosulfan II	124	116	141	99.3	6.38	34.5
	Endosulfan Sulfate	116	101	106	93.5	13.7	12.9
	Endrin	96.1	86.6	93.7	73.7	10.4	23.9
	Endrin Aldehyde	101	90.5	14.3	64.4	11.0	127
	Endrin Ketone	109	96.1	102	89.3	13.0	12.8
	EPTC	61.4	60.1	69.5	57.2	2.08	19.4
	Ethion	87.8	86.4	89.9	83.7	1.60	7.24
	Ethoprop	97.9	102	113	102	4.19	9.87
	Fenamiphos	94.8	102	102	87.9	6.93	15.3
	Fipronil	96.1	102	106	92.9	5.79	10.9
	Fipronil Sulfide	93.8	102	108	94.4	8.21	9.95
	Fipronil Sulfone	88.6	94.6			6.53	12.3
	Fonofos	94.7	98.6	107	96.7	4.02	10.2
	Gamma-BHC	102	89.2	103	82.4	13.2	22.0
	Gamma-Chlordane	92.2	81.2	90.9	75.8	12.7	18.1
	Heptachlor	77.1	66.5	74.8	61.4	14.9	19.8
	Heptachlor Epoxide	96.8	85.9	93.9	79.3	11.9	14.3
	Hexazinone	110	118	110	107	6.69	2.85
	Malathion	91.6	95.0	106	92.8	3.73	12.9
	Metalaxyl	94.3	101	107	93.7	7.06	12.9
	Methoxychlor	99.8	93.2	92.5	81.0	6.90	13.2
	Metolachlor	95.9	101	102	95.3	4.98	6.53
	Metribuzin	169	189	227	215	11.2	5.67
	Mevinphos	84.5	88.9	101	85.2	5.03	16.7
	Mirex	77.0	68.5	76.8	66.4	11.7	14.5
	Molinate	67.0	67.9	74.3	63.1	1.26	16.3
	Norflurazon	90.3	95.1	100	88.4	5.21	12.6
	Parathion Ethyl	92.0	98.5	104	94.5	6.78	9.65
	Parathion Methyl	100	104	114	101	3.80	12.7
	Pendimethalin	104	112	120	112	6.99	6.31
	Permethrin	94.9	87.2	97.5	87.8	8.47	10.5
	Phorate	84.4	92.3	97.2	89.3	9.03	8.56
	Prometon	87.4	92.2	102	95.7	5.37	6.41

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
EPA 8270D	Prometryn	93.9	100	101	95.7	6.53	5.13
	Simazine	105	110			4.33	8.31
	Terbufos	90.3	98.6	104	95.1	8.77	8.51
	Terbuthylazine	96.3	103	106	100	6.32	5.72
	Trifluralin	81.8	73.1	77.2	66.9	11.2	14.4
EPA 8276	Chlordane	79.1	66.7	76.9	73.8	16.9	4.05
	Toxaphene	87.8	81.2	84.6	80.1	7.91	5.48
EPA 8321B	2,4-D	82.6		49.0	50.3		2.52
	3-Hydroxycarbofuran	92.4		100	102		1.89
	Acetaminophen	98.1		112	125		11.1
	Aldicarb	67.9		63.9	71.5		11.2
	Aldicarb Sulfone	105		120	124		3.98
	Aldicarb Sulfoxide	114		102	108		5.58
	AMPA	115		109	104		4.46
	Bentazon	90.2		26.3	27.1		2.14
	Carbamazepine	65.4		75.8	76.1		0.401
	Carbaryl	61.8		55.3	56.6		2.24
	Carbofuran	52.7		58.3	48.5		18.3
	Diuron	66.5		60.6	63.4		4.09
	Fenuron	96.3		81.7	86.9		6.22
	Fluridone	82.1		71.0	78.3		8.96
	Glyphosate	111		111	113		1.95
	Imazapyr	73.5		39.2	50.0		9.78
	Imidacloprid	90.1		134	149		9.13
	Linuron	71.9		71.3	74.0		3.60
	MCPP	78.0		35.5	34.3		3.43
	Methiocarb	63.7		63.5	70.2		10.1
	Methomyl	103		86.3	87.7		1.69
	Oxamyl	94.5		85.6	88.1		2.94
	Primidone	108		112	111		0.955
	Propoxur	44.3		50.8	42.9		17.0
	Pyraclostrobin	61.6		58.9	60.6		2.89
	Sucralose	116		121	124		1.93
	Triclopyr	74.3		40.9	38.6		5.78
SM 2120 B	Color (true)					1.13	
SM 2320 B-97	Total Alkalinity	102				0.128	
SM 2540 C-97	TDS					0.315	
SM 4500 F-C-97	Fluoride	94.9		96.9	95.4		0.960
SM 5310 B-00	Organic Carbon	94.9		98.6	98.4		0.224
	Organic Carbon	93.8		93.9	94.8		0.516

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1970873, 1970876, 1970877
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1970911, 1970912, 1970913
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1970911, 1970912, 1970913
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1970873, 1970876, 1970877
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1970873, 1970876, 1970877

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1970874, 1970878, 1970879
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1970874, 1970878, 1970879
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1970874, 1970878, 1970879
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1970874, 1970878, 1970879
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1970875, 1970880, 1970881
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1970905, 1970907, 1970908
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1970906, 1970909, 1970910
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1970905, 1970907, 1970908
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	1970897, 1970899, 1970900
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1970898, 1970901, 1970902
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1970898, 1970901, 1970902, 1970903, 1970904
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1970898, 1970901, 1970902, 1970903, 1970904
SM 2120 B / E31780	True Color measured at 450 nm	1970873, 1970876, 1970877
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1970873, 1970876, 1970877
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1970873, 1970876, 1970877
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1970873, 1970876, 1970877
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1970873, 1970876, 1970877
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1970874, 1970878, 1970879

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	03/01/2018			03/01/2018 15:23	DeAsia Armster	1970873, 1970876, 1970877
EPA 200.7 Rev. 4.4	03/01/2018	03/05/2018	Elliott D. Healy	03/08/2018	Betina Topolski	1970911, 1970912, 1970913
EPA 200.8 Rev. 5.4	03/01/2018	03/05/2018	Elliott D. Healy	03/09/2018	Nadine Brooks	1970911, 1970912, 1970913
	03/01/2018	03/15/2018	Elliott D. Healy	03/23/2018	Robert K Palmer	1970911, 1970912, 1970913
	03/01/2018	03/15/2018	Elliott D. Healy	03/26/2018	Robert K Palmer	1970911, 1970912, 1970913
EPA 300.0 Rev. 2.1	03/01/2018			03/06/2018	Lipi Saha	1970873, 1970876, 1970877
EPA 350.1 Rev. 2.0	03/01/2018			03/05/2018	Ping Hua	1970874, 1970878, 1970879
EPA 351.2 Rev. 2.0	03/01/2018	03/02/2018	Adrian Shelby	03/06/2018	Joseph Suarez	1970874, 1970878, 1970879
EPA 353.2 Rev. 2.0	03/01/2018			03/02/2018	Lauren Bottorf	1970874, 1970878, 1970879
EPA 365.1 Rev. 2.0	03/01/2018	03/02/2018	Sima Feizi	03/05/2018	Beverly Y. Sanders	1970874, 1970878, 1970879
EPA 365.1 Rev. 2.0 dissolved	03/01/2018			03/01/2018 16:04	Megan Treadwell	1970880
	03/01/2018			03/01/2018 16:09	Megan Treadwell	1970881
	03/01/2018			03/01/2018 16:23	Megan Treadwell	1970875
EPA 8270D	03/01/2018	03/05/2018	Rasheda Ghaffari	03/09/2018	Vandana T. Nagar	1970905, 1970907, 1970908
	03/01/2018	03/05/2018	Rasheda Ghaffari	03/14/2018	Vandana T. Nagar	1970909, 1970910
EPA 8276	03/01/2018	03/05/2018	Rasheda Ghaffari	03/13/2018	John P. Burgos	1970905, 1970907, 1970908
EPA 8321B	03/01/2018	03/01/2018	Julie Michelle Frank	03/01/2018	Julie Michelle Frank	1970898, 1970901, 1970902
	03/01/2018	03/02/2018	Hoor Shaik	03/03/2018	Julie Michelle Frank	1970898, 1970901, 1970902, 1970903, 1970904
	03/01/2018	03/02/2018	Hoor Shaik	03/04/2018	Julie Michelle Frank	1970897, 1970899, 1970900
	03/01/2018	03/02/2018	Julie Michelle Frank	03/03/2018	Juyoung Kim	1970898, 1970901, 1970902, 1970903, 1970904
SM 2120 B	03/01/2018			03/01/2018 15:06	Tanya Welborn	1970873
	03/01/2018			03/01/2018 15:07	Tanya Welborn	1970876, 1970877
SM 2320 B-97	03/01/2018			03/09/2018	Dale L. Simmons	1970873, 1970876, 1970877
SM 2540 C-97	03/01/2018			03/02/2018	DeAsia Armster	1970873, 1970876, 1970877
SM 2540 D-97	03/01/2018			03/02/2018	DeAsia Armster	1970873, 1970876, 1970877
SM 4500 F-C-97	03/01/2018			03/09/2018	Dale L. Simmons	1970873, 1970876, 1970877
SM 5310 B-00	03/01/2018			03/05/2018	Megan Treadwell	1970874, 1970878
	03/01/2018			03/06/2018	Megan Treadwell	1970879