

Chemical Analysis Report

NW-DIST-2018-08-14-01

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

Event Description: **Holmes RUN**
Request ID: **RQ-2018-08-13-31**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 208
Pensacola, FL 32502-5794
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 06-SEP-2018 10:40

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

Case Narrative

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

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

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

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

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Limestone Branch upstream of Mt. Ida Rd

Collection Date/Time: 08/13/2018 11:45

Field ID: G3NW0023

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2016942	EPA 180.1 Rev. 2.0	Turbidity	3.9		NTU	P350099	
	EPA 300.0 Rev. 2.1	Chloride	3.8		mg Cl/L	P350986	
		Sulfate	1.4		mg SO4/L	P350989	
		Color (true)	21		PCU	P350089	
	SM 2320 B-97	Total Alkalinity	78		mg CaCO3/L	P350415	
	SM 2540 C-97	TDS	93		mg/L	P350516	
	SM 2540 D-97	TSS	2	I	mg/L	P350399	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P350416	
2016943	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P350444	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.26		mg N/L	P350204	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.17		mg N/L	P350364	
	EPA 365.1 Rev. 2.0	Total-P	0.013		mg P/L	P350436	
	SM 5310 B-00	Organic Carbon	2.6		mg C/L	P350387	
2016944	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	I	mg P/L	P350090	
2016965	EPA 200.7 Rev. 4.4	Calcium	32.9		mg/L	P350165	
		Iron	480		ug/L	P350165	
		Magnesium	2.05		mg/L	P350165	
		Potassium	0.55	I	mg/L	P350165	
		Sodium	2.0	I	mg/L	P350165	
		Zinc	5.0	U	ug/L	P350165	
	EPA 200.8 Rev. 5.4	Arsenic	0.40		ug/L	P350165	
		Cadmium	0.020	U	ug/L	P350165	
		Chromium	0.40	U	ug/L	P350165	
		Copper	0.49	I	ug/L	P350165	
		Lead	0.078	I	ug/L	P350165	
		Nickel	0.20	U	ug/L	P350165	
		Silver	0.010	U	ug/L	P350165	

Ref. Method and Comment:

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

Sample Location: East Pittman Creek upstream of Hwy 179

Collection Date/Time: 08/13/2018 12:15

Field ID: G3NW0157

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2016939	EPA 180.1 Rev. 2.0	Turbidity	5.4		NTU	P350099	
	EPA 300.0 Rev. 2.1	Chloride	3.6		mg Cl/L	P350417	
		Sulfate	0.41	I	mg SO4/L	P350419	
	SM 2120 B	Color (true)	87		PCU	P350089	
	SM 2320 B-97	Total Alkalinity	9.9		mg CaCO3/L	P350185	
	SM 2540 C-97	TDS	45		mg/L	P350516	
	SM 2540 D-97	TSS	6	I	mg/L	P350399	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P350188	
2016940	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P350444	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.50		mg N/L	P350204	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.47		mg N/L	P350364	
	EPA 365.1 Rev. 2.0	Total-P	0.021		mg P/L	P350435	
	SM 5310 B-00	Organic Carbon	8.6		mg C/L	P350387	
2016941	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P350090	
2016954	EPA 8321B	Aldicarb	0.020	U	ug/L	P349977	MS
		Aldicarb Sulfone	0.0020	U	ug/L	P349977	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P349977	MS
		Carbaryl	0.0020	U	ug/L	P349977	MS
		Carbofuran	0.0020	U	ug/L	P349977	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P349977	
		Methiocarb	0.0020	U	ug/L	P349977	MS
		Methomyl	0.0020	U	ug/L	P349977	
		Oxamyl	0.0020	U	ug/L	P349977	
		Propoxur	0.0020	U	ug/L	P349977	MS
2016955		2,4-D	0.0020	U	ug/L	P349977	
		Bentazon	8.0E-04	U	ug/L	P349977	
		MCP	0.0020	U	ug/L	P349977	
		Triclopyr**	0.0040	U	ug/L	P349977	MS
		Imidacloprid	0.0020	U	ug/L	P349977	
		Diuron	0.0020	U	ug/L	P349977	
		Pyraclostrobin**	0.0020	U	ug/L	P349977	
		Primidone**	0.0040	U	ug/L	P349977	
		Linuron	0.0040	U	ug/L	P349977	
		Acetaminophen**	0.0080	U	ug/L	P349977	
		Fenuron	0.016	U	ug/L	P349977	
		Imazapyr**	0.065		ug/L	P349977	
		Carbamazepine**	8.0E-04	U	ug/L	P349977	
		Fluridone**	4.0E-04	U	ug/L	P349977	
		Hydrocodone**	8.0E-04	U	ug/L	P349977	
		Naproxen**	0.0080	U	ug/L	P349977	
		Ibuprofen**	0.020	U	ug/L	P349977	
		Sucralose**	0.010	U	ug/L	P350234	
		Glyphosate**	0.10	U	ug/L	P350234	

Field ID: G3NW0157

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2016955	EPA 8321B	AMPA**	0.10	U	ug/L	P350234	
		Endothall**	0.10	U	ug/L	P350234	
		Glufosinate**	0.10	U	ug/L	P350234	
		Acesulfame K**	0.10	U	ug/L	P350234	
2016959	EPA 8270D	Aldrin	4.4	UJ	ng/L	P350280	LCS
		Alpha-BHC	2.2	U	ng/L	P350280	
		Beta-BHC	4.4	U	ng/L	P350280	
		Delta-BHC	4.4	U	ng/L	P350280	
		Gamma-BHC	4.4	U	ng/L	P350280	
		Carbophenothion	4.4	U	ng/L	P350280	
		Chlorothalonil	2.2	U	ng/L	P350280	
		Cypermethrin	22	U	ng/L	P350280	
		DDD-p,p'	3.3	U	ng/L	P350280	
		DDE-p,p'	3.3	U	ng/L	P350280	
		DDT-p,p'	3.3	U	ng/L	P350280	
		Dieldrin	4.4	U	ng/L	P350280	
		Endosulfan I	4.4	U	ng/L	P350280	
		Endosulfan II	4.4	U	ng/L	P350280	
		Endosulfan Sulfate	2.2	U	ng/L	P350280	
		Endrin	2.2	U	ng/L	P350280	
		Endrin Aldehyde	2.2	U	ng/L	P350280	
		Heptachlor	1.6	U	ng/L	P350280	
		Heptachlor Epoxide	2.2	U	ng/L	P350280	
		Methoxychlor	4.4	U	ng/L	P350280	
		Mirex	2.2	UJ	ng/L	P350280	LCS
		Permethrin	11	U	ng/L	P350280	
		Trifluralin	1.1	U	ng/L	P350280	
		Alpha-Chlordane	1.1	U	ng/L	P350280	
		Gamma-Chlordane	1.1	U	ng/L	P350280	
		Endrin Ketone	2.2	U	ng/L	P350280	MS
		Dicofol	33	U	ng/L	P350280	
	EPA 8276	Chlordane	3.7	IJ	ng/L	P350280	MS
		Toxaphene	33	UJ	ng/L	P350280	MS
2016960	EPA 8270D	Alachlor	0.25	U	ng/L	P350084	
		Ametryn	0.33	U	ng/L	P350084	RPD
		Atrazine	5.2		ng/L	P350084	
		Atrazine Desethyl	1.5	U	ng/L	P350084	
		Azinphos Methyl	2.3	U	ng/L	P350084	
		Bromacil	0.51	U	ng/L	P350084	
		Butylate	0.41	U	ng/L	P350084	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P350084	
		Chlorpyrifos Methyl	0.10	U	ng/L	P350084	
		Demeton	2.0	U	ng/L	P350084	
		Diazinon	0.13	UJ	ng/L	P350084	LCS, MS
		Disulfoton	0.51	U	ng/L	P350084	

Field ID: G3NW0157

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2016960	EPA 8270D	EPTC	1.3	U	ng/L	P350084	
		Ethion	0.15	UJ	ng/L	P350084	LCS, MS
		Ethoprop	0.10	U	ng/L	P350084	
		Fenamiphos	0.25	U	ng/L	P350084	
		Fipronil	0.25	U	ng/L	P350084	
		Fipronil Sulfide	0.15	U	ng/L	P350084	
		Fipronil Sulfone	0.15	U	ng/L	P350084	
		Hexazinone	0.51	I	ng/L	P350084	
		Malathion	0.36	U	ng/L	P350084	
		Metribuzin	0.20	UJ	ng/L	P350084	LCS
		Mevinphos	0.51	U	ng/L	P350084	
		Molinate	0.31	U	ng/L	P350084	RPD
		Norflurazon	0.51	U	ng/L	P350084	
		Pendimethalin	1.0	U	ng/L	P350084	
		Phorate	0.25	U	ng/L	P350084	
		Prometon	0.92	U	ng/L	P350084	
		Prometryn	0.20	U	ng/L	P350084	
		Simazine	0.51	U	ng/L	P350084	
		Terbufos	0.10	U	ng/L	P350084	
		Terbutylazine	0.43	U	ng/L	P350084	
		Fonofos	0.20	U	ng/L	P350084	
		Metalaxyl	0.25	U	ng/L	P350084	
		Metolachlor	3.2		ng/L	P350084	
		Acetochlor	0.45	I	ng/L	P350084	
		Cyanazine	0.51	U	ng/L	P350084	RPD
		Parathion Ethyl	0.25	U	ng/L	P350084	
		Parathion Methyl	0.25	U	ng/L	P350084	
2016964	EPA 200.7 Rev. 4.4	Calcium	4.49		mg/L	P350165	
		Iron	1.50E+03		ug/L	P350165	
		Magnesium	1.31		mg/L	P350165	
		Potassium	0.72	I	mg/L	P350165	
		Sodium	1.9	I	mg/L	P350165	
		Zinc	5.0	U	ug/L	P350165	
	EPA 200.8 Rev. 5.4	Arsenic	0.62		ug/L	P350165	
		Cadmium	0.029	I	ug/L	P350165	
		Chromium	0.41	I	ug/L	P350165	
		Copper	0.29	I	ug/L	P350165	
		Lead	0.22		ug/L	P350165	
		Nickel	0.47	I	ug/L	P350165	
		Silver	0.010	U	ug/L	P350165	

Ref. Method and Comment:

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

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

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

Sample Location: Sikes Creek upstream of Bonifay Gritney Rd Collection Date/Time: 08/13/2018 12:45

Field ID: G3NW0159

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2016945	EPA 180.1 Rev. 2.0	Turbidity	3.7	A	NTU	P350099	
	EPA 300.0 Rev. 2.1	Chloride	2.6		mg Cl/L	P350417	
		Sulfate	0.20	U	mg SO4/L	P350419	
	SM 2120 B	Color (true)	200		PCU	P350089	
	SM 2320 B-97	Total Alkalinity	16		mg CaCO3/L	P350185	
	SM 2540 C-97	TDS	62		mg/L	P350516	
	SM 2540 D-97	TSS	4	I	mg/L	P350399	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P350188	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.039		mg N/L	P350444	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.80		mg N/L	P350205	
2016946	EPA 353.2 Rev. 2.0	NO2NO3-N	0.045		mg N/L	P350364	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P350436	
	SM 5310 B-00	Organic Carbon	20		mg C/L	P350387	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P350090	
	dissolved						

Ref. Method and Comment:

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P350099

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P350165

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: P350165

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: P350417

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P350419

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P350986

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P350989

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P350444

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P350204

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P350205

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P350364

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P350435

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P350436

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P350090

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

Reference Method: EPA 8270D
Batch ID: P350084

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D

Batch ID: P350084

Component	Result	Code	Units
Cyanazine	0.50	U	ng/L
Demeton	2.0	U	ng/L
Diazinon	0.12	U	ng/L
Disulfoton	0.50	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metaxyl	0.25	U	ng/L
Metolachlor	0.25	U	ng/L
Metribuzin	0.20	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8270D

Batch ID: P350280

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270D

Batch ID: P350280

Component	Result	Code	Units
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: P350280

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

Reference Method: EPA 8321B

Batch ID: P349977

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
3-Hydroxycarbofuran	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Aldicarb	0.020	U	ug/L
Aldicarb Sulfone	0.0020	U	ug/L
Aldicarb Sulfoxide	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	4.0E-04	U	ug/L
Hydrocodone	8.0E-04	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.0020	U	ug/L
Methiocarb	0.0020	U	ug/L
Methomyl	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Oxamyl	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Propoxur	0.0020	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P350234

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

Reference Method: SM 2120 B
Batch ID: P350089

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P350185

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

Reference Method: SM 2320 B-97
Batch ID: P350415

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

Reference Method: SM 2540 C-97
Batch ID: P350516

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P350399

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P350188

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P350416

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-00
Batch ID: P350387

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: P350165

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	103		P	85 - 115
Iron	102		P	85 - 115
Magnesium	105		P	85 - 115
Potassium	97.5		P	85 - 115
Sodium	99.6		P	85 - 115
Zinc	95.9		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P350165

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	100		P	85 - 115
Cadmium	99.7		P	85 - 115
Chromium	98.1		P	85 - 115
Copper	97.7		P	85 - 115
Lead	98.2		P	85 - 115
Nickel	101		P	85 - 115
Silver	100		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P350417

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	92.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P350419

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P350986

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P350989

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P350444

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P350204

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P350205

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P350364

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P350435

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P350436

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	94.3		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P350090

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

Reference Method: EPA 8270D
Batch ID: P350084

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	107	114	P/P	74 - 119
Alachlor	106	116	P/P	75 - 118
Ametryn	108	120	P/P	59 - 137
Atrazine	110	115	P/P	73 - 120
Atrazine Desethyl	111	114	P/P	19 - 129
Azinphos Methyl	130	129	P/P	65 - 181
Bromacil	93.7	96.5	P/P	43 - 123
Butylate	69.0	66.3	P/P	28 - 85.0
Chlorpyrifos Ethyl	96.4	98.7	P/P	55 - 112
Chlorpyrifos Methyl	109	109	P/P	35 - 124
Cyanazine	123	131	P/P	26 - 262
Demeton	85.5	88.7	P/P	43 - 122
Diazinon	118	127	P/F	72 - 120
Disulfoton	86.0	103	P/P	45 - 137
EPTC	64.9	63.9	P/P	28 - 95.0
Ethion	52.4	51.3	F/F	63 - 127

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
 Batch ID: P350084

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ethoprop	92.3	103	P/P	63 - 109
Fenamiphos	96.7	105	P/P	66 - 136
Fipronil	107	113	P/P	63 - 126
Fipronil Sulfide	98.9	100	P/P	59 - 123
Fipronil Sulfone	89.6	91.4	P/P	56 - 122
Fonofos	111	111	P/P	64 - 114
Hexazinone	98.5	102	P/P	49 - 144
Malathion	106	105	P/P	68 - 131
Metalaxyl	106	114	P/P	57 - 126
Metolachlor	98.7	104	P/P	75 - 118
Metribuzin	170	179	F/F	46 - 169
Mevinphos	106	102	P/P	34 - 126
Molinate	73.9	73.4	P/P	37 - 101
Norflurazon	105	109	P/P	63 - 127
Parathion Ethyl	102	103	P/P	78 - 109
Parathion Methyl	110	111	P/P	74 - 123
Pendimethalin	107	111	P/P	51 - 130
Phorate	94.3	90.7	P/P	53 - 116
Prometon	96.1	97.0	P/P	66 - 124
Prometryn	106	110	P/P	66 - 124
Simazine	103	105	P/P	62 - 134
Terbufos	105	103	P/P	59 - 115
Terbuthylazine	105	110	P/P	76 - 113

Reference Method: EPA 8270D
 Batch ID: P350280

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	95.5	82.4	F/P	24 - 89.0
Alpha-BHC	99.6	87.0	P/P	58 - 117
Alpha-Chlordane	110	96.9	P/P	56 - 115
Beta-BHC	115	108	P/P	55 - 137
Carbophenothion	116	110	P/P	37 - 145
Chlorothalonil	83.3	71.2	P/P	26 - 163
Cypermethrin	114	109	P/P	42 - 156
DDD-p,p'	123	115	P/P	59 - 129
DDE-p,p'	108	95.3	P/P	52 - 117
DDT-p,p'	111	96.8	P/P	48 - 128
Delta-BHC	128	116	P/P	59 - 158
Dicofol	97.2	83.7	P/P	19 - 124
Dieldrin	107	99.3	P/P	57 - 126
Endosulfan I	109	96.2	P/P	59 - 133
Endosulfan II	124	110	P/P	58 - 148
Endosulfan Sulfate	119	108	P/P	56 - 135
Endrin	110	104	P/P	50 - 140
Endrin Aldehyde	120	108	P/P	47 - 141
Endrin Ketone	113	104	P/P	63 - 123
Gamma-BHC	114	92.3	P/P	59 - 132
Gamma-Chlordane	110	99.4	P/P	55 - 112
Heptachlor	96.6	82.4	P/P	45 - 102
Heptachlor Epoxide	110	97.4	P/P	61 - 116
Methoxychlor	119	105	P/P	60 - 133

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P350280

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Mirex	99.3	88.6	F/P	40 - 98.0
Permethrin	109	100	P/P	45 - 131
Trifluralin	101	92.6	P/P	38 - 179

Reference Method: EPA 8276
Batch ID: P350280

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	103	107	P/P	47 - 125
Toxaphene	93.7	89.5	P/P	46 - 147

Reference Method: EPA 8321B
Batch ID: P349977

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	95.9		P	40 - 150
3-Hydroxycarbofuran	82.2		P	40 - 150
Acetaminophen	94.5		P	30 - 150
Aldicarb	59.1		P	30 - 150
Aldicarb Sulfone	88.8		P	40 - 150
Aldicarb Sulfoxide	91.2		P	40 - 150
Bentazon	122		P	30 - 150
Carbamazepine	75.5		P	40 - 150
Carbaryl	52.0		P	40 - 150
Carbofuran	60.7		P	40 - 150
Diuron	78.5		P	40 - 150
Fenuron	104		P	40 - 150
Fluridone	68.3		P	40 - 150
Hydrocodone	93.3		P	40 - 150
Ibuprofen	108		P	40 - 150
Imazapyr	89.0		P	40 - 150
Imidacloprid	105		P	40 - 160
Linuron	60.4		P	40 - 150
MCPP	103		P	40 - 150
Methiocarb	47.7		P	40 - 150
Methomyl	80.2		P	40 - 150
Naproxen	91.3		P	40 - 150
Oxamyl	102		P	40 - 150
Primidone	99.0		P	40 - 150
Propoxur	54.2		P	40 - 150
Pyraclostrobin	74.2		P	40 - 150
Triclopyr	106		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P350234

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	92.9		P	40 - 150
AMPA	89.0		P	40 - 140
Endothall	92.0		P	40 - 150
Glufosinate	86.9		P	40 - 150
Glyphosate	97.8		P	40 - 140

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P350234

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	107		P	40 - 150

Reference Method: SM 2120 B
Batch ID: P350089

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.0		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P350185

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 107

Reference Method: SM 2320 B-97
Batch ID: P350415

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

Reference Method: SM 4500 F-C-97
Batch ID: P350188

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.5		P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P350416

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.7		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P350387

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.2		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P350165

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2016847	Calcium	102		P	80 - 120
2016847	Iron	100	104	P/P	80 - 120
2016847	Magnesium	101	106	P/P	80 - 120
2016847	Potassium	96.2	99.8	P/P	80 - 120
2016847	Sodium	95.8		P	80 - 120
2016847	Zinc	98.4	97.9	P/P	80 - 120
2017023	Calcium	105		P	80 - 120
2017023	Iron	104		P	80 - 120
2017023	Magnesium	104		P	80 - 120
2017023	Potassium	101		P	80 - 120
2017023	Sodium	97.1		P	80 - 120
2017023	Zinc	98.6		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P350165

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2016847	Arsenic	99.7	101	P/P	80 - 120
2016847	Cadmium	99.9	100	P/P	80 - 120
2016847	Chromium	95.1	95.2	P/P	80 - 120
2016847	Copper	96.2	97.1	P/P	80 - 120
2016847	Lead	96.3	98.0	P/P	80 - 120
2016847	Nickel	96.7	97.0	P/P	80 - 120
2016847	Silver	98.0	98.9	P/P	80 - 120
2017023	Arsenic	102		P	80 - 120
2017023	Cadmium	101		P	80 - 120
2017023	Chromium	97.5		P	80 - 120
2017023	Copper	93.1		P	80 - 120
2017023	Lead	98.1		P	80 - 120
2017023	Nickel	96.1		P	80 - 120
2017023	Silver	99.5		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P350417

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2016901	Chloride	95.4		P	90 - 110
2017001	Chloride	96.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P350419

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2016901	Sulfate	93.9		P	90 - 110
2017001	Sulfate	94.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P350986

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2019112	Chloride	101		P	90 - 110
2019302	Chloride	100		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P350989

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2019112	Sulfate	98.6		P	90 - 110
2019302	Sulfate	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P350444

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2016940	Ammonia-N	97.9	97.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P350204

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2016943	Kjeldahl Nitrogen	95.4	95.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P350205

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2017002	Kjeldahl Nitrogen	90.4	95.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P350364

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2016920	NO2NO3-N	96.0	95.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P350435

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2016903	Total-P	98.3	97.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P350436

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2016943	Total-P	97.1	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P350090

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2016905	O-Phosphate-P	97.5	97.4	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P350084

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2016450	Acetochlor	97.4	91.4	P/P	67 - 125
2016450	Alachlor	101	96.9	P/P	69 - 123
2016450	Ametryn	89.3	121	P/P	52 - 151

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P350084

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2016450	Atrazine	94.3	81.2	P/P	71 - 125
2016450	Atrazine Desethyl	81.7	88.5	P/P	10 - 129
2016450	Azinphos Methyl	83.9	121	P/P	48 - 200
2016450	Bromacil	80.2	87.6	P/P	46 - 130
2016450	Butylate	62.8	71.6	P/P	10 - 85.0
2016450	Chlorpyrifos Ethyl	81.6	66.7	P/P	54 - 115
2016450	Chlorpyrifos Methyl	80.1	77.8	P/P	44 - 117
2016450	Cyanazine	32.6	51.9	P/P	10 - 262
2016450	Demeton	84.8	88.8	P/P	24 - 145
2016450	Diazinon	130	123	F/P	66 - 129
2016450	Disulfoton	80.2	88.0	P/P	45 - 139
2016450	EPTC	60.3	59.5	P/P	10 - 86.0
2016450	Ethion	20.6	15.4	F/F	59 - 133
2016450	Ethoprop	92.3	72.8	P/P	54 - 116
2016450	Fenamiphos	99.5	101	P/P	55 - 140
2016450	Fipronil	99.2	97.6	P/P	37 - 142
2016450	Fipronil Sulfide	74.9	73.2	P/P	37 - 130
2016450	Fipronil Sulfone	71.8	69.7	P/P	18 - 143
2016450	Fonofos	101	98.7	P/P	55 - 118
2016450	Hexazinone	97.3	99.7	P/P	62 - 140
2016450	Malathion	84.8	84.3	P/P	64 - 132
2016450	Metalaxyl	96.7	95.3	P/P	55 - 129
2016450	Metolachlor	75.3	74.7	P/P	56 - 137
2016450	Metribuzin	150	148	P/P	16 - 218
2016450	Mevinphos	85.8	98.0	P/P	34 - 129
2016450	Molinate	85.6	57.5	P/P	16 - 99.0
2016450	Norflurazon	85.2	82.7	P/P	43 - 135
2016450	Parathion Ethyl	82.1	83.3	P/P	71 - 112
2016450	Parathion Methyl	105	108	P/P	65 - 127
2016450	Pendimethalin	108	101	P/P	35 - 159
2016450	Phorate	87.4	87.9	P/P	41 - 129
2016450	Prometon	78.4	76.1	P/P	56 - 140
2016450	Prometryn	98.8	95.6	P/P	65 - 130
2016450	Simazine	88.4	84.5	P/P	54 - 148
2016450	Terbufos	108	105	P/P	53 - 126
2016450	Terbutylazine	107	103	P/P	73 - 114

Reference Method: EPA 8270D
Batch ID: P350280

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2017132	Aldrin	53.7	61.1	P/P	26 - 96.0
2017132	Alpha-BHC	75.7	80.3	P/P	51 - 123
2017132	Alpha-Chlordane	67.7	75.4	P/P	45 - 120
2017132	Beta-BHC	90.6	107	P/P	43 - 146
2017132	Carbophenothion	110	133	P/P	26 - 179
2017132	Chlorothalonil	127	152	P/P	10 - 215
2017132	Cypermethrin	131	142	P/P	35 - 169
2017132	DDD-p,p'	79.3	100	P/P	49 - 131
2017132	DDE-p,p'	67.5	79.7	P/P	39 - 127
2017132	DDT-p,p'	70.6	77.4	P/P	49 - 120
2017132	Delta-BHC	117	127	P/P	49 - 187

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
 Batch ID: P350280

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2017132	Dicofol	81.3	80.9	P/P	10 - 129
2017132	Dieldrin	63.7	73.9	P/P	46 - 132
2017132	Endosulfan I	75.9	74.5	P/P	57 - 130
2017132	Endosulfan II	95.6	112	P/P	52 - 148
2017132	Endosulfan Sulfate	101	108	P/P	55 - 129
2017132	Endrin	70.7	70.6	P/P	45 - 133
2017132	Endrin Aldehyde	76.1	64.1	P/P	26 - 140
2017132	Endrin Ketone	109	126	P/F	60 - 125
2017132	Gamma-BHC	79.1	72.3	P/P	50 - 145
2017132	Gamma-Chlordane	68.3	75.9	P/P	44 - 118
2017132	Heptachlor	56.9	62.4	P/P	35 - 106
2017132	Heptachlor Epoxide	70.7	78.1	P/P	52 - 123
2017132	Methoxychlor	78.7	94.8	P/P	54 - 132
2017132	Mirex	60.3	64.5	P/P	36 - 107
2017132	Permethrin	86.2	91.0	P/P	47 - 135
2017132	Trifluralin	64.3	69.0	P/P	32 - 228

Reference Method: EPA 8276
 Batch ID: P350280

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2016959	Chlordane	42.2	36.5	P/F	41 - 134
2016959	Toxaphene	42.1	38.6	P/F	39 - 158

Reference Method: EPA 8321B
 Batch ID: P349977

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2017234	3-Hydroxycarbofuran	48.1	44.2	P/P	40 - 150
2017234	Aldicarb	24.7	23.9	F/F	30 - 150
2017234	Aldicarb Sulfone	55.7	54.4	P/P	40 - 150
2017234	Aldicarb Sulfoxide	27.7	25.9	F/F	40 - 150
2017234	Carbaryl	39.2	37.2	F/F	40 - 150
2017234	Carbofuran	49.7	51.0	P/P	40 - 150
2017234	Methiocarb	45.2	39.1	P/F	40 - 150
2017234	Methomyl	41.7	45.4	P/P	40 - 150
2017234	Oxamyl	59.9	56.9	P/P	40 - 150
2017234	Propoxur	35.3	34.1	F/F	40 - 150
2017235	2,4-D	144	133	P/P	40 - 150
2017235	Acetaminophen	106	127	P/P	30 - 150
2017235	Bentazon	120	103	P/P	30 - 150
2017235	Carbamazepine	54.3	55.0	P/P	40 - 150
2017235	Diuron	54.9	63.1	P/P	40 - 150
2017235	Fenuron	69.1	68.6	P/P	40 - 150
2017235	Fluridone	48.6	52.7	P/P	40 - 150
2017235	Hydrocodone	74.4	76.4	P/P	40 - 150
2017235	Ibuprofen	72.5	70.9	P/P	40 - 150
2017235	Imazapyr	91.1	104	P/P	40 - 150
2017235	Imidacloprid	144	148	P/P	40 - 160
2017235	Linuron	55.9	53.4	P/P	40 - 150
2017235	MCP	132	128	P/P	40 - 150
2017235	Naproxen	113	92.3	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P349977

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2017235	Primidone	87.2	89.4	P/P	40 - 150
2017235	Pyraclostrobin	75.0	75.2	P/P	40 - 150
2017235	Triclopyr	154	154	F/F	40 - 150

Reference Method: EPA 8321B
Batch ID: P350234

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2017129	Acesulfame K	66.6	62.3	P/P	40 - 150
2017129	AMPA	73.0	73.6	P/P	40 - 140
2017129	Endothall	116	114	P/P	40 - 150
2017129	Glufosinate	70.8	79.9	P/P	40 - 150
2017129	Glyphosate	74.1	74.3	P/P	40 - 140
2017129	Sucralose	109	105	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P350188

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2016825	Fluoride	104	103	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P350416

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2017137	Fluoride	97.5	96.4	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P350387

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2017059	Organic Carbon	101	96.9	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P350099

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2016945	Turbidity	3.24	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P350165

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2016847	Calcium	0.796	Spike	P	0 - 20
2016847	Iron	3.50	Spike	P	0 - 20
2016847	Magnesium	3.19	Spike	P	0 - 20
2016847	Potassium	2.51	Spike	P	0 - 20
2016847	Sodium	0.419	Spike	P	0 - 20
2016847	Zinc	0.517	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P350165

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2016847	Arsenic	0.801	Spike	P	0 - 20
2016847	Cadmium	0.406	Spike	P	0 - 20
2016847	Chromium	0.0612	Spike	P	0 - 20
2016847	Copper	0.965	Spike	P	0 - 20
2016847	Lead	1.70	Spike	P	0 - 20
2016847	Nickel	0.384	Spike	P	0 - 20
2016847	Silver	0.963	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P350417

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2016901	Chloride	2.92	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P350419

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2016901	Sulfate	3.16	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P350986

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2019112	Chloride	0.922	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P350989

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2019112	Sulfate	0.483	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P350444

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2016940	Ammonia-N	0.489	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P350204

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2016943	Kjeldahl Nitrogen	0.213	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P350205

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2017002	Kjeldahl Nitrogen	3.43	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P350364

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2016920	NO2NO3-N	0.299	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P350435

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2016903	Total-P	1.10	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P350436

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2016943	Total-P	7.44	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P350090

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2016905	O-Phosphate-P	0.103	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P350084

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2016450	Acetochlor	6.36	Spike	P	0 - 30
2016450	Alachlor	3.93	Spike	P	0 - 30
2016450	Ametryn	30.5	Spike	F	0 - 30
2016450	Atrazine	10.1	Spike	P	0 - 30
2016450	Atrazine Desethyl	7.96	Spike	P	0 - 30
2016450	Azinphos Methyl	17.7	Spike	P	0 - 30
2016450	Bromacil	8.85	Spike	P	0 - 30
2016450	Butylate	13.0	Spike	P	0 - 30
2016450	Chlorpyrifos Ethyl	16.6	Spike	P	0 - 30
2016450	Chlorpyrifos Methyl	2.99	Spike	P	0 - 30
2016450	Cyanazine	45.7	Spike	F	0 - 30
2016450	Demeton	4.60	Spike	P	0 - 30
2016450	Diazinon	5.52	Spike	P	0 - 30
2016450	Disulfoton	9.16	Spike	P	0 - 30
2016450	EPTC	1.29	Spike	P	0 - 30
2016450	Ethion	28.8	Spike	P	0 - 30
2016450	Ethoprop	20.9	Spike	P	0 - 30
2016450	Fenamiphos	1.71	Spike	P	0 - 30
2016450	Fipronil	1.63	Spike	P	0 - 30
2016450	Fipronil Sulfide	2.35	Spike	P	0 - 30
2016450	Fipronil Sulfone	2.95	Spike	P	0 - 30
2016450	Fonofos	1.91	Spike	P	0 - 30
2016450	Hexazinone	2.19	Spike	P	0 - 30
2016450	Malathion	0.656	Spike	P	0 - 30
2016450	Metalaxyl	1.48	Spike	P	0 - 30
2016450	Metolachlor	0.565	Spike	P	0 - 30
2016450	Metribuzin	1.01	Spike	P	0 - 30
2016450	Mevinphos	13.3	Spike	P	0 - 30
2016450	Molinate	39.3	Spike	F	0 - 30
2016450	Norflurazon	3.03	Spike	P	0 - 30
2016450	Parathion Ethyl	1.48	Spike	P	0 - 30
2016450	Parathion Methyl	2.76	Spike	P	0 - 30
2016450	Pendimethalin	6.74	Spike	P	0 - 30
2016450	Phorate	0.589	Spike	P	0 - 30
2016450	Prometon	2.97	Spike	P	0 - 30
2016450	Prometryn	3.30	Spike	P	0 - 30
2016450	Simazine	4.48	Spike	P	0 - 30
2016450	Terbufos	3.32	Spike	P	0 - 30
2016450	Terbuthylazine	4.07	Spike	P	0 - 30
LFB	Acetochlor	5.54	LCS	P	0 - 30
LFB	Alachlor	8.82	LCS	P	0 - 30
LFB	Ametryn	10.1	LCS	P	0 - 30
LFB	Atrazine	5.06	LCS	P	0 - 30
LFB	Atrazine Desethyl	3.02	LCS	P	0 - 30
LFB	Azinphos Methyl	0.739	LCS	P	0 - 30
LFB	Bromacil	2.89	LCS	P	0 - 30
LFB	Butylate	4.03	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	2.29	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	0.198	LCS	P	0 - 30
LFB	Cyanazine	6.23	LCS	P	0 - 30
LFB	Demeton	3.65	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P350084

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Diazinon	7.11	LCS	P	0 - 30
LFB	Disulfoton	17.7	LCS	P	0 - 30
LFB	EPTC	1.51	LCS	P	0 - 30
LFB	Ethion	1.95	LCS	P	0 - 30
LFB	Ethoprop	11.3	LCS	P	0 - 30
LFB	Fenamiphos	7.84	LCS	P	0 - 30
LFB	Fipronil	5.37	LCS	P	0 - 30
LFB	Fipronil Sulfide	1.14	LCS	P	0 - 30
LFB	Fipronil Sulfone	2.03	LCS	P	0 - 30
LFB	Fonofos	0.0519	LCS	P	0 - 30
LFB	Hexazinone	3.97	LCS	P	0 - 30
LFB	Malathion	0.135	LCS	P	0 - 30
LFB	Metaxyl	7.08	LCS	P	0 - 30
LFB	Metolachlor	5.17	LCS	P	0 - 30
LFB	Metribuzin	5.18	LCS	P	0 - 30
LFB	Mevinphos	4.33	LCS	P	0 - 30
LFB	Molinate	0.776	LCS	P	0 - 30
LFB	Norflurazon	3.47	LCS	P	0 - 30
LFB	Parathion Ethyl	1.10	LCS	P	0 - 30
LFB	Parathion Methyl	0.555	LCS	P	0 - 30
LFB	Pendimethalin	3.14	LCS	P	0 - 30
LFB	Phorate	3.88	LCS	P	0 - 30
LFB	Prometon	0.894	LCS	P	0 - 30
LFB	Prometryn	3.67	LCS	P	0 - 30
LFB	Simazine	1.55	LCS	P	0 - 30
LFB	Terbufos	1.77	LCS	P	0 - 30
LFB	Terbutylazine	4.47	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P350280

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2017132	Aldrin	12.8	Spike	P	0 - 30
2017132	Alpha-BHC	5.95	Spike	P	0 - 30
2017132	Alpha-Chlordane	10.8	Spike	P	0 - 30
2017132	Beta-BHC	16.7	Spike	P	0 - 30
2017132	Carbophenothion	19.5	Spike	P	0 - 30
2017132	Chlorothalonil	18.1	Spike	P	0 - 30
2017132	Cypermethrin	8.26	Spike	P	0 - 30
2017132	DDD-p,p'	23.1	Spike	P	0 - 30
2017132	DDE-p,p'	16.6	Spike	P	0 - 30
2017132	DDT-p,p'	9.19	Spike	P	0 - 30
2017132	Delta-BHC	8.76	Spike	P	0 - 30
2017132	Dicofol	0.423	Spike	P	0 - 30
2017132	Dieldrin	14.9	Spike	P	0 - 30
2017132	Endosulfan I	1.88	Spike	P	0 - 30
2017132	Endosulfan II	16.1	Spike	P	0 - 30
2017132	Endosulfan Sulfate	6.17	Spike	P	0 - 30
2017132	Endrin	0.119	Spike	P	0 - 30
2017132	Endrin Aldehyde	17.1	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P350280

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2017132	Endrin Ketone	14.3	Spike	P	0 - 30
2017132	Gamma-BHC	9.00	Spike	P	0 - 30
2017132	Gamma-Chlordane	10.6	Spike	P	0 - 30
2017132	Heptachlor	9.15	Spike	P	0 - 30
2017132	Heptachlor Epoxide	9.90	Spike	P	0 - 30
2017132	Methoxychlor	18.6	Spike	P	0 - 30
2017132	Mirex	6.79	Spike	P	0 - 30
2017132	Permethrin	5.47	Spike	P	0 - 30
2017132	Trifluralin	7.17	Spike	P	0 - 30
LFB	Aldrin	14.7	LCS	P	0 - 30
LFB	Alpha-BHC	13.4	LCS	P	0 - 30
LFB	Alpha-Chlordane	12.9	LCS	P	0 - 30
LFB	Beta-BHC	5.86	LCS	P	0 - 30
LFB	Carbophenothion	6.01	LCS	P	0 - 30
LFB	Chlorothalonil	15.6	LCS	P	0 - 30
LFB	Cypermethrin	4.48	LCS	P	0 - 30
LFB	DDD-p,p'	7.16	LCS	P	0 - 30
LFB	DDE-p,p'	12.9	LCS	P	0 - 30
LFB	DDT-p,p'	13.3	LCS	P	0 - 30
LFB	Delta-BHC	9.56	LCS	P	0 - 30
LFB	Dicofol	14.9	LCS	P	0 - 30
LFB	Dieldrin	7.57	LCS	P	0 - 30
LFB	Endosulfan I	12.5	LCS	P	0 - 30
LFB	Endosulfan II	11.3	LCS	P	0 - 30
LFB	Endosulfan Sulfate	9.29	LCS	P	0 - 30
LFB	Endrin	5.60	LCS	P	0 - 30
LFB	Endrin Aldehyde	10.8	LCS	P	0 - 30
LFB	Endrin Ketone	8.07	LCS	P	0 - 30
LFB	Gamma-BHC	21.3	LCS	P	0 - 30
LFB	Gamma-Chlordane	9.67	LCS	P	0 - 30
LFB	Heptachlor	15.8	LCS	P	0 - 30
LFB	Heptachlor Epoxide	12.0	LCS	P	0 - 30
LFB	Methoxychlor	12.2	LCS	P	0 - 30
LFB	Mirex	11.4	LCS	P	0 - 30
LFB	Permethrin	8.63	LCS	P	0 - 30
LFB	Trifluralin	8.89	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P350280

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2016959	Chlordane	11.9	Spike	P	0 - 30
2016959	Toxaphene	8.54	Spike	P	0 - 30
LFB	Chlordane	3.26	LCS	P	0 - 30
LFB	Toxaphene	4.58	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P349977

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2017234	3-Hydroxycarbofuran	8.41	Spike	P	0 - 30
2017234	Aldicarb	3.54	Spike	P	0 - 30
2017234	Aldicarb Sulfone	2.37	Spike	P	0 - 30
2017234	Aldicarb Sulfoxide	6.88	Spike	P	0 - 30
2017234	Carbaryl	5.08	Spike	P	0 - 30
2017234	Carbofuran	2.46	Spike	P	0 - 30
2017234	Methiocarb	14.4	Spike	P	0 - 30
2017234	Methomyl	8.31	Spike	P	0 - 30
2017234	Oxamyl	5.15	Spike	P	0 - 30
2017234	Propoxur	3.32	Spike	P	0 - 30
2017235	2,4-D	5.85	Spike	P	0 - 30
2017235	Acetaminophen	18.0	Spike	P	0 - 30
2017235	Bentazon	12.8	Spike	P	0 - 30
2017235	Carbamazepine	1.32	Spike	P	0 - 30
2017235	Diuron	11.6	Spike	P	0 - 30
2017235	Fenuron	0.808	Spike	P	0 - 30
2017235	Fluridone	3.37	Spike	P	0 - 30
2017235	Hydrocodone	2.70	Spike	P	0 - 30
2017235	Ibuprofen	2.29	Spike	P	0 - 30
2017235	Imazapyr	7.22	Spike	P	0 - 30
2017235	Imidacloprid	1.85	Spike	P	0 - 30
2017235	Linuron	4.55	Spike	P	0 - 30
2017235	MCPP	3.06	Spike	P	0 - 30
2017235	Naproxen	20.0	Spike	P	0 - 30
2017235	Primidone	2.52	Spike	P	0 - 30
2017235	Pyraclostrobin	0.353	Spike	P	0 - 30
2017235	Triclopyr	0.318	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P350234

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2017129	Acesulfame K	6.70	Spike	P	0 - 30
2017129	AMPA	0.397	Spike	P	0 - 30
2017129	Endothall	1.33	Spike	P	0 - 30
2017129	Glufosinate	12.1	Spike	P	0 - 30
2017129	Glyphosate	0.120	Spike	P	0 - 30
2017129	Sucralose	3.80	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P350089

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2016893	Color (true)	0.106	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
 Batch ID: P350185

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2016825	Total Alkalinity	0.331	Sample	P	0 - 1.6

Reference Method: SM 2320 B-97
 Batch ID: P350415

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2017137	Total Alkalinity	1.45	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
 Batch ID: P350516

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2016862	TDS	3.15	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P350188

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2016825	Fluoride	0.479	Spike	P	0 - 3.5

Reference Method: SM 4500 F-C-97
 Batch ID: P350416

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2017137	Fluoride	0.969	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
 Batch ID: P350387

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2017059	Organic Carbon	2.58	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: 2016954
Field Sample ID: G3NW0157

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	33.7	P	30 - 160

Lab Sample ID: 2016955
Field Sample ID: G3NW0157

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	99.1	P	30 - 160
EPA 8321B	Acetaminophen-d4	132	P	30 - 160
EPA 8321B	Carbamazepine-d10	61.0	P	30 - 160
EPA 8321B	Diuron-d6	68.2	P	30 - 160
EPA 8321B	Endothall-d6	125	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	120	P	40 - 160
EPA 8321B	Ibuprofen-d3	76.8	P	30 - 160
EPA 8321B	Primidone-d5	95.5	P	30 - 160
EPA 8321B	Sucralose-d6	99.2	P	40 - 160

Lab Sample ID: 2016959
Field Sample ID: G3NW0157

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	57.7	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	41.6	P	34 - 101
EPA 8276	Decachlorobiphenyl	49.7	P	31 - 108
EPA 8276	PCNB	74.7	P	62 - 142

Lab Sample ID: 2016960
Field Sample ID: G3NW0157

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	115	P	71 - 126
EPA 8270D	Terbufos-d10	121	P	59 - 149

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A85845

Included Lab Sample IDs: 2016939, 2016945

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.8	101	P/P	90 - 110
Sulfate	98.8	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A85864

Included Lab Sample IDs: 2016941, 2016944, 2016947

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.9	98.4	P/P	90 - 110
O-Phosphate-P	99.6	98.9	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A85865

Included Lab Sample IDs: 2016939, 2016942, 2016945

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.5	98.4	P/P	90 - 115
Color (true)	99.5	99.1	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A85866

Included Lab Sample IDs: 2016939, 2016942, 2016945

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

Reference Method: SM 2320 B-97

Run ID: A85905

Included Lab Sample IDs: 2016939, 2016945

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	103	P/P	90 - 110
Total Alkalinity	103	103	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A85905

Included Lab Sample IDs: 2016939, 2016945

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	99.5	P/P	90 - 110
Fluoride	99.5	101	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A85942

Included Lab Sample IDs: 2016964, 2016965

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	104	103	P/P	90 - 110
Iron	102	100	P/P	90 - 110
Magnesium	103	101	P/P	90 - 110
Potassium	100	98.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A85942

Included Lab Sample IDs: 2016964, 2016965

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sodium	98.8	97.2	P/P	90 - 110
Zinc	97.1	96.5	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A85960

Included Lab Sample IDs: 2016955

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	69.0	79.5	P/P	60 - 160
Glufosinate	85.4	101	P/P	60 - 160
Glyphosate	112	139	P/P	60 - 160

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A85961

Included Lab Sample IDs: 2016964, 2016965

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	95.9	94.7	P/P	90 - 110
Cadmium	93.6	94.6	P/P	90 - 110
Chromium	93.8	94.3	P/P	90 - 110
Copper	94.7	92.7	P/P	90 - 110
Lead	99.1	98.4	P/P	90 - 110
Nickel	94.1	92.9	P/P	90 - 110
Silver	96.3	96.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A85973

Included Lab Sample IDs: 2016940, 2016943, 2016946

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.5	100	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A85976

Included Lab Sample IDs: 2016955

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	104	119	P/P	60 - 160
Endothall	86.5	102	P/P	60 - 160

Reference Method: SM 5310 B-00

Run ID: A85977

Included Lab Sample IDs: 2016940, 2016943, 2016946

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.8	97.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A85982

Included Lab Sample IDs: 2016940, 2016943, 2016946

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.9	91.7	P/P	90 - 110
Kjeldahl Nitrogen	97.6	94.9	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A85983

Included Lab Sample IDs: 2016955

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	93.8	99.4	P/P	60 - 160

Reference Method: SM 2320 B-97

Run ID: A85991

Included Lab Sample IDs: 2016942

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

Reference Method: SM 4500 F-C-97

Run ID: A85991

Included Lab Sample IDs: 2016942

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.5	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A86004

Included Lab Sample IDs: 2016940, 2016943, 2016946

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	99.5	P/P	90 - 110
Ammonia-N	99.5	98.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A86028

Included Lab Sample IDs: 2016940, 2016943, 2016946

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

Reference Method: EPA 8270D

Run ID: A86054

Included Lab Sample IDs: 2016959

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	99.7		P	80 - 120
Alpha-BHC	99.8		P	80 - 120
Alpha-Chlordane	102		P	80 - 120
Beta-BHC	87.8		P	80 - 120
Carbophenothion	91.2		P	80 - 120
Chlorothalonil	105		P	80 - 120
Cypermethrin	90.4		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A86054

Included Lab Sample IDs: 2016959

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
DDD-p,p'	102		P	80 - 120
DDE-p,p'	105		P	80 - 120
DDT-p,p'	108		P	80 - 120
Delta-BHC	90.1		P	80 - 120
Dicofol	105		P	80 - 120
Dieldrin	101		P	80 - 120
Endosulfan I	103		P	80 - 120
Endosulfan II	98.0		P	80 - 120
Endosulfan Sulfate	94.2		P	80 - 120
Endrin	106		P	80 - 120
Endrin Aldehyde	95.8		P	80 - 120
Endrin Ketone	96.8		P	80 - 120
Gamma-BHC	91.4		P	80 - 120
Gamma-Chlordane	102		P	80 - 120
Heptachlor	99.9		P	80 - 120
Heptachlor Epoxide	102		P	80 - 120
Methoxychlor	104		P	80 - 120
Mirex	103		P	80 - 120
Permethrin	95.6		P	80 - 120
Trifluralin	101		P	80 - 120

Reference Method: EPA 8276

Run ID: A86077

Included Lab Sample IDs: 2016959

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	93.9		P	80 - 120
Toxaphene	105		P	80 - 120

Reference Method: EPA 8270D

Run ID: A86081

Included Lab Sample IDs: 2016960

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	99.3		P	80 - 120
Alachlor	101		P	80 - 120
Ametryn	98.3		P	80 - 120
Atrazine	93.1		P	80 - 120
Atrazine Desethyl	96.0		P	80 - 120
Azinphos Methyl	102		P	80 - 120
Bromacil	100		P	80 - 120
Butylate	97.7		P	80 - 120
Chlorpyrifos Ethyl	96.8		P	80 - 120
Chlorpyrifos Methyl	96.1		P	80 - 120
Cyanazine	93.0		P	80 - 120
Demeton	101		P	80 - 120
Diazinon	98.3		P	80 - 120
Disulfoton	96.7		P	80 - 120
EPTC	99.9		P	80 - 120
Ethion	94.3		P	80 - 120
Ethoprop	102		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A86081

Included Lab Sample IDs: 2016960

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fenamiphos	91.2		P	80 - 120
Fipronil	97.6		P	80 - 120
Fipronil Sulfide	93.7		P	80 - 120
Fipronil Sulfone	96.1		P	80 - 120
Fonofos	97.4		P	80 - 120
Hexazinone	92.5		P	80 - 120
Malathion	96.4		P	80 - 120
Metalaxyl	99.4		P	80 - 120
Metolachlor	104		P	80 - 120
Metribuzin	87.2		P	80 - 120
Mevinphos	97.1		P	80 - 120
Molinate	101		P	80 - 120
Norflurazon	97.3		P	80 - 120
Parathion Ethyl	90.2		P	80 - 120
Parathion Methyl	94.3		P	80 - 120
Pendimethalin	96.4		P	80 - 120
Phorate	95.0		P	80 - 120
Prometon	99.0		P	80 - 120
Prometryn	99.2		P	80 - 120
Simazine	98.7		P	80 - 120
Terbufos	95.3		P	80 - 120
Terbuthylazine	97.3		P	80 - 120

Reference Method: EPA 8321B

Run ID: A86097

Included Lab Sample IDs: 2016955

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	93.6	100	P/P	50 - 150
Bentazon	115	115	P/P	50 - 160
Ibuprofen	112	124	P/P	50 - 160
MCPD	79.3	98.5	P/P	50 - 150
Naproxen	89.8	85.8	P/P	50 - 160
Triclopyr	91.2	105	P/P	50 - 160

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A86194

Included Lab Sample IDs: 2016942

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	103	104	P/P	90 - 110
Sulfate	101	103	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A86195

Included Lab Sample IDs: 2016955

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	111	117	P/P	60 - 150
Carbamazepine	103	101	P/P	60 - 150
Diuron	119	127	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A86195

Included Lab Sample IDs: 2016955

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fenuron	108	108	P/P	60 - 150
Fluridone	108	112	P/P	60 - 160
Hydrocodone	112	114	P/P	60 - 150
Imazapyr	104	109	P/P	50 - 150
Imidacloprid	111	117	P/P	60 - 150
Linuron	109	104	P/P	60 - 150
Primidone	108	119	P/P	60 - 150
Pyraclostrobin	99.9	101	P/P	60 - 150

Reference Method: EPA 8321B

Run ID: A86253

Included Lab Sample IDs: 2016954

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	93.6	94.8	P/P	50 - 150
Aldicarb	67.4	86.9	P/P	60 - 150
Aldicarb Sulfone	99.1	102	P/P	50 - 150
Aldicarb Sulfoxide	112	117	P/P	50 - 150
Carbaryl	88.6	98.0	P/P	60 - 150
Carbofuran	72.7	68.6	P/P	50 - 150
Methiocarb	81.7	79.1	P/P	50 - 150
Methomyl	107	108	P/P	50 - 150
Oxamyl	124	122	P/P	50 - 150
Propoxur	79.0	79.1	P/P	50 - 150

* 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							3.24	
EPA 200.7 Rev. 4.4	Calcium	103		102	105				0.796
	Iron	102		100	104	104			3.50
	Magnesium	105		101	106	104			3.19
	Potassium	97.5		96.2	99.8	101			2.51
	Sodium	99.6		95.8	97.1				0.419
	Zinc	95.9		98.4	97.9	98.6			0.517
EPA 200.8 Rev. 5.4	Arsenic	100		99.7	101	102			0.801
	Cadmium	99.7		99.9	100	101			0.406
	Chromium	98.1		95.1	95.2	97.5			0.0612
	Copper	97.7		96.2	97.1	93.1			0.965
	Lead	98.2		96.3	98.0	98.1			1.70
	Nickel	101		96.7	97.0	96.1			0.384
	Silver	100		98.0	98.9	99.5			0.963
EPA 300.0 Rev. 2.1	Chloride	92.9		95.4	96.0			2.92	
	Chloride	105		101	100			0.922	
	Sulfate	93.0		93.9	94.9			3.16	
	Sulfate	104		98.6	102			0.483	
EPA 350.1 Rev. 2.0	Ammonia-N	99.0		97.9	97.2				0.489
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103		95.4	95.7				0.213
	Kjeldahl Nitrogen	102		90.4	95.1				3.43
EPA 353.2 Rev. 2.0	NO2NO3-N	100		96.0	95.5				0.299
EPA 365.1 Rev. 2.0	Total-P	97.2		98.3	97.1				1.10
	Total-P	94.3		97.1	105				7.44
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101		97.5	97.4				0.103
EPA 8270D	Acetochlor	107	114	97.4	91.4	5.54			6.36
	Alachlor	106	116	101	96.9	8.82			3.93
	Aldrin	95.5	82.4	53.7	61.1	14.7			12.8
	Alpha-BHC	99.6	87.0	75.7	80.3	13.4			5.95
	Alpha-Chlordane	110	96.9	67.7	75.4	12.9			10.8
	Ametryn	108	120	89.3	121	10.1			30.5
	Atrazine	110	115	94.3	81.2	5.06			10.1
	Atrazine Desethyl	111	114	81.7	88.5	3.02			7.96
	Azinphos Methyl	130	129	83.9	121	0.739			17.7
	Beta-BHC	115	108	90.6	107	5.86			16.7
	Bromacil	93.7	96.5	80.2	87.6	2.89			8.85
	Butylate	69.0	66.3	62.8	71.6	4.03			13.0
	Carbophenothion	116	110	110	133	6.01			19.5
	Chlorothalonil	83.3	71.2	127	152	15.6			18.1
	Chlorpyrifos Ethyl	96.4	98.7	81.6	66.7	2.29			16.6
	Chlorpyrifos Methyl	109	109	80.1	77.8	0.198			2.99
	Cyanazine	123	131	32.6	51.9	6.23			45.7
	Cypermethrin	114	109	131	142	4.48			8.26
	DDD-p,p'	123	115	79.3	100	7.16			23.1
	DDE-p,p'	108	95.3	67.5	79.7	12.9			16.6
	DDT-p,p'	111	96.8	70.6	77.4	13.3			9.19
	Delta-BHC	128	116	117	127	9.56			8.76
	Demeton	85.5	88.7	84.8	88.8	3.65			4.60
	Diazinon	118	127	130	123	7.11			5.52
	Dicofol	97.2	83.7	81.3	80.9	14.9			0.423
	Dieldrin	107	99.3	63.7	73.9	7.57			14.9
	Disulfoton	86.0	103	80.2	88.0	17.7			9.16
	Endosulfan I	109	96.2	75.9	74.5	12.5			1.88
	Endosulfan II	124	110	95.6	112	11.3			16.1

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Endosulfan Sulfate	119	108	101	108	9.29	6.17
	Endrin	110	104	70.7	70.6	5.60	0.119
	Endrin Aldehyde	120	108	76.1	64.1	10.8	17.1
	Endrin Ketone	113	104	109	126	8.07	14.3
	EPTC	64.9	63.9	60.3	59.5	1.51	1.29
	Ethion	52.4	51.3	20.6	15.4	1.95	28.8
	Ethoprop	92.3	103	92.3	72.8	11.3	20.9
	Fenamiphos	96.7	105	99.5	101	7.84	1.71
	Fipronil	107	113	99.2	97.6	5.37	1.63
	Fipronil Sulfide	98.9	100	74.9	73.2	1.14	2.35
	Fipronil Sulfone	89.6	91.4	71.8	69.7	2.03	2.95
	Fonofos	111	111	101	98.7	0.0519	1.91
	Gamma-BHC	114	92.3	79.1	72.3	21.3	9.00
	Gamma-Chlordane	110	99.4	68.3	75.9	9.67	10.6
	Heptachlor	96.6	82.4	56.9	62.4	15.8	9.15
	Heptachlor Epoxide	110	97.4	70.7	78.1	12.0	9.90
	Hexazinone	98.5	102	97.3	99.7	3.97	2.19
	Malathion	106	105	84.8	84.3	0.135	0.656
	Metalaxyl	106	114	96.7	95.3	7.08	1.48
	Methoxychlor	119	105	78.7	94.8	12.2	18.6
	Metolachlor	98.7	104	75.3	74.7	5.17	0.565
	Metribuzin	170	179	150	148	5.18	1.01
	Mevinphos	106	102	85.8	98.0	4.33	13.3
	Mirex	99.3	88.6	60.3	64.5	11.4	6.79
	Molinate	73.9	73.4	85.6	57.5	0.776	39.3
	Norflurazon	105	109	85.2	82.7	3.47	3.03
	Parathion Ethyl	102	103	82.1	83.3	1.10	1.48
	Parathion Methyl	110	111	105	108	0.555	2.76
	Pendimethalin	107	111	108	101	3.14	6.74
	Permethrin	109	100	86.2	91.0	8.63	5.47
	Phorate	94.3	90.7	87.4	87.9	3.88	0.589
	Prometon	96.1	97.0	78.4	76.1	0.894	2.97
	Prometryn	106	110	98.8	95.6	3.67	3.30
	Simazine	103	105	88.4	84.5	1.55	4.48
	Terbufos	105	103	108	105	1.77	3.32
	Terbutylazine	105	110	107	103	4.47	4.07
	Trifluralin	101	92.6	64.3	69.0	8.89	7.17
EPA 8276	Chlordane	103	107	42.2	36.5	3.26	11.9
	Toxaphene	93.7	89.5	42.1	38.6	4.58	8.54
EPA 8321B	2,4-D	95.9		144	133		5.85
	3-Hydroxycarbofuran	82.2		48.1	44.2		8.41
	Acesulfame K	92.9		66.6	62.3		6.70
	Acetaminophen	94.5		106	127		18.0
	Aldicarb	59.1		24.7	23.9		3.54
	Aldicarb Sulfone	88.8		55.7	54.4		2.37
	Aldicarb Sulfoxide	91.2		27.7	25.9		6.88
	AMPA	89.0		73.0	73.6		0.397
	Bentazon	122		120	103		12.8
	Carbamazepine	75.5		54.3	55.0		1.32
	Carbaryl	52.0		39.2	37.2		5.08
	Carbofuran	60.7		49.7	51.0		2.46
	Diuron	78.5		54.9	63.1		11.6
	Endothall	92.0		116	114		1.33
	Fenuron	104		69.1	68.6		0.808

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8321B	Fluridone	68.3	48.6	52.7			3.37
	Glufosinate	86.9	70.8	79.9			12.1
	Glyphosate	97.8	74.1	74.3			0.120
	Hydrocodone	93.3	74.4	76.4			2.70
	Ibuprofen	108	72.5	70.9			2.29
	Imazapyr	89.0	91.1	104			7.22
	Imidacloprid	105	144	148			1.85
	Linuron	60.4	55.9	53.4			4.55
	MCPP	103	132	128			3.06
	Methiocarb	47.7	45.2	39.1			14.4
	Methomyl	80.2	41.7	45.4			8.31
	Naproxen	91.3	113	92.3			20.0
	Oxamyl	102	59.9	56.9			5.15
	Primidone	99.0	87.2	89.4			2.52
	Propoxur	54.2	35.3	34.1			3.32
	Pyraclostrobin	74.2	75.0	75.2			0.353
	Sucralose	107	109	105			3.80
	Triclopyr	106	154	154			0.318
SM 2120 B	Color (true)	98.0				0.106	
SM 2320 B-97	Total Alkalinity	103				0.331	
	Total Alkalinity	102				1.45	
SM 2540 C-97	TDS					3.15	
SM 4500 F-C-97	Fluoride	98.5	104	103			0.479
	Fluoride	97.7	97.5	96.4			0.969
SM 5310 B-00	Organic Carbon	96.2	101	96.9			2.58

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2016939, 2016942, 2016945
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2016964, 2016965
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2016964, 2016965
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2016939, 2016942, 2016945
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2016939, 2016942, 2016945
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2016940, 2016943, 2016946
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2016940, 2016943, 2016946
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2016940, 2016943, 2016946
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2016940, 2016943, 2016946
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2016941, 2016944, 2016947
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	2016959
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	2016960
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2016959
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	2016954

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2016955
SM 2120 B / E31780	True Color measured at 450 nm	2016939, 2016942, 2016945
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2016939, 2016942, 2016945
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2016939, 2016942, 2016945
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2016939, 2016942, 2016945
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2016939, 2016942, 2016945
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2016940, 2016943, 2016946

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	08/14/2018			08/14/2018 15:06	William L. Brown IV	2016939, 2016942, 2016945
EPA 200.7 Rev. 4.4	08/14/2018	08/15/2018 16:20	Elliott D. Healy	08/16/2018 16:38	Betina Topolski	2016964
	08/14/2018	08/15/2018 16:20	Elliott D. Healy	08/16/2018 16:44	Betina Topolski	2016965
EPA 200.8 Rev. 5.4	08/14/2018	08/15/2018 16:20	Elliott D. Healy	08/16/2018 20:23	Allison Taylor	2016964
	08/14/2018	08/15/2018 16:20	Elliott D. Healy	08/16/2018 20:33	Allison Taylor	2016965
EPA 300.0 Rev. 2.1	08/14/2018			08/16/2018 17:56	Lipi Saha	2016939
	08/14/2018			08/16/2018 18:20	Lipi Saha	2016945
	08/14/2018			08/30/2018 17:19	Lipi Saha	2016942
EPA 350.1 Rev. 2.0	08/14/2018			08/17/2018 12:27	Ping Hua	2016940
	08/14/2018			08/17/2018 13:46	Ping Hua	2016943
	08/14/2018			08/17/2018 13:47	Ping Hua	2016946
EPA 351.2 Rev. 2.0	08/14/2018	08/16/2018 15:30	Adrian Shelby	08/17/2018 13:33	Joseph Suarez	2016940
	08/14/2018	08/16/2018 15:30	Adrian Shelby	08/17/2018 13:34	Joseph Suarez	2016943
	08/14/2018	08/16/2018 15:30	Adrian Shelby	08/17/2018 13:45	Joseph Suarez	2016946
EPA 353.2 Rev. 2.0	08/14/2018			08/17/2018 13:34	Lauren Bottorf	2016940
	08/14/2018			08/17/2018 13:35	Lauren Bottorf	2016943
	08/14/2018			08/17/2018 13:37	Lauren Bottorf	2016946
EPA 365.1 Rev. 2.0	08/14/2018	08/20/2018 12:57	Sima Feizi	08/21/2018 12:13	Beverly Y. Sanders	2016940
	08/14/2018	08/20/2018 12:57	Sima Feizi	08/21/2018 12:16	Beverly Y. Sanders	2016943
	08/14/2018	08/20/2018 12:57	Sima Feizi	08/21/2018 12:17	Beverly Y. Sanders	2016946
EPA 365.1 Rev. 2.0 dissolved	08/14/2018			08/14/2018 16:08	Julia Storbeck	2016941
	08/14/2018			08/14/2018 16:09	Julia Storbeck	2016944
	08/14/2018			08/14/2018 16:14	Julia Storbeck	2016947
EPA 8270D	08/14/2018	08/15/2018 02:30	Rasheda Ghaffari	08/17/2018 19:57	Vandana T. Nagar	2016960
	08/14/2018	08/17/2018 11:30	Rasheda Ghaffari	08/21/2018 18:24	Dinesh Mishra	2016959
EPA 8276	08/14/2018	08/17/2018 11:30	Rasheda Ghaffari	08/22/2018 13:15	Arthur Maknenko	2016959
EPA 8321B	08/14/2018	08/16/2018 09:00	Hoor Shaik	08/24/2018 04:15	Juyoung Kim	2016955
	08/14/2018	08/16/2018 09:00	Hoor Shaik	08/25/2018 08:09	Juyoung Kim	2016955
	08/14/2018	08/16/2018 09:00	Hoor Shaik	09/01/2018 04:30	Juyoung Kim	2016954
	08/14/2018	08/17/2018 09:00	Mohammad Ghaffari	08/17/2018 11:14	Mohammad Ghaffari	2016955
	08/14/2018	08/17/2018 09:00	Mohammad Ghaffari	08/17/2018 16:40	Mohammad Ghaffari	2016955
	08/14/2018	08/17/2018 09:00	Mohammad Ghaffari	08/18/2018 01:21	Mohammad Ghaffari	2016955
SM 2120 B	08/14/2018			08/14/2018 16:09	Tanya Welborn	2016939
	08/14/2018			08/14/2018 16:10	Tanya Welborn	2016942
	08/14/2018			08/14/2018 16:23	Tanya Welborn	2016945
SM 2320 B-97	08/14/2018			08/16/2018 01:06	Dale L. Simmons	2016939
	08/14/2018			08/16/2018 01:45	Dale L. Simmons	2016945
	08/14/2018			08/17/2018 03:40	Dale L. Simmons	2016942
SM 2540 C-97	08/14/2018			08/15/2018 15:06	Yijie Li	2016939, 2016942, 2016945
SM 2540 D-97	08/14/2018			08/15/2018 15:06	Yijie Li	2016939, 2016942, 2016945

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 4500 F-C-97	08/14/2018			08/16/2018 01:06	Dale L. Simmons	2016939
	08/14/2018			08/16/2018 01:45	Dale L. Simmons	2016945
	08/14/2018			08/17/2018 03:40	Dale L. Simmons	2016942
SM 5310 B-00	08/14/2018			08/17/2018 15:20	Megan Treadwell	2016940
	08/14/2018			08/17/2018 15:33	Megan Treadwell	2016943
	08/14/2018			08/17/2018 15:46	Megan Treadwell	2016946