Chemical Analysis Report

NE-DIST-2019-09-19-01

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

Event Description: **SCI Cedar and Daughtery**
Request ID: **RQ-2019-09-16-16**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Colin Wright, Program Administrator

Date Certified: 17-OCT-2019 10:40

NON-CONFORMANCE REPORT INCLUDED

Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: Cedar at Picketville Rd. **Collection Date/Time: 09/18/2019 09:25**

Field ID: G2NE1191 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2121004	EPA 180.1 Rev. 2.0	Turbidity	14		NTU	P371017	
	EPA 300.0 Rev. 2.1	Chloride	35		mg Cl/L	P371223	
		Sulfate	15		mg SO4/L	P371226	
	SM 2120 B	Color (true)	150		PCU	P371012	
	SM 2320 B-97	Total Alkalinity	54		mg CaCO3/L	P371526	
	SM 2540 C-97	TDS	184		mg/L	P371353	
	SM 2540 D-97	TSS	23		mg/L	P371273	
	SM 4500 F-C-97	Fluoride	0.092	I	mg F/L	P371530	
2121006	EPA 350.1 Rev. 2.0	Ammonia-N	0.035		mg N/L	P371592	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.70		mg N/L	P371285	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.056		mg N/L	P371291	
	EPA 365.1 Rev. 2.0	Total-P	0.054		mg P/L	P371552	
	SM 5310 B-00	Organic Carbon	17		mg C/L	P371180	
2121008	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.019		mg P/L	P371007	
2121020	EPA 8321B	Acesulfame K**	0.38	I	ug/L	P371101	
		2,4-D	0.0020	U	ug/L	P370852	MS
		AMPA**	0.25	I	ug/L	P371101	
		Sucralose**	0.51		ug/L	P371101	
		Acetaminophen**	0.0080	U	ug/L	P370852	
		Acetamiprid**	0.0020	U	ug/L	P370852	
		Endothall**	0.25	U	ug/L	P371101	
		Glufosinate**	0.10	U	ug/L	P371101	
		Glyphosate**	0.17	I	ug/L	P371101	
		Afidopyropen**	0.0020	UJ	ug/L	P370852	
		Bentazon	0.0097		ug/L	P370852	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P370852	
		Carbamazepine**	8.0E-04	U	ug/L	P370852	
		Clothianidin**	0.0058	I	ug/L	P370852	
		Dinotefuran**	0.0020	U	ug/L	P370852	
		Diuron	0.0020	U	ug/L	P370852	
		Fenuron	0.016	U	ug/L	P370852	
		Fluridone**	0.0021	I	ug/L	P370852	
		Imazapyr**	0.11		ug/L	P370852	
		Hydrocodone**	0.0020	U	ug/L	P370852	
		Ibuprofen**	0.020	U	ug/L	P370852	
		Imidacloprid	0.0020	U	ug/L	P370852	MS
		Linuron	0.0040	U	ug/L	P370852	
		Mandestrobin**	0.0020	UJ	ug/L	P370852	
		MCPP	0.0020	UJ	ug/L	P370852	LCS, MS
		Naproxen**	0.0080	U	ug/L	P370852	
		Primidone**	0.0040	U	ug/L	P370852	
		Pyraclostrobin**	0.0020	U	ug/L	P370852	
		Thiamethoxam**	0.0020	U	ug/L	P370852	

Field ID: G2NE1191 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2121020	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P370852	
		Triclopyr**	0.0040	U	ug/L	P370852	
2121029	EPA 200.7 Rev. 4.4	Barium	37.4		ug/L	P371231	
		Calcium	24.9		mg/L	P371231	
		Iron	930		ug/L	P371231	
		Magnesium	4.00		mg/L	P371231	
		Potassium	1.9		mg/L	P371231	
		Sodium	22.5		mg/L	P371231	
		Zinc	7.1	I	ug/L	P372214	
	EPA 200.8 Rev. 5.4	Aluminum	243		ug/L	P371231	
		Antimony	0.12	I	ug/L	P371231	
		Arsenic	1.65		ug/L	P371231	
		Boron**	41.8		ug/L	P371231	
		Cadmium	0.020	U	ug/L	P371231	
		Chromium	0.65	I	ug/L	P371231	
		Copper	1.05		ug/L	P371231	
		Lead	0.81		ug/L	P371231	
		Nickel	0.83	I	ug/L	P371231	
		Selenium	0.20	U	ug/L	P371231	
		Silver	0.010	U	ug/L	P371231	
		Thallium	0.10	U	ug/L	P371231	
2121032	EPA 8270E	Acetochlor	0.24	U	ng/L	P371188	
		Alachlor	0.24	U	ng/L	P371188	
		Ametryn	0.58	U	ng/L	P371188	
		Atrazine	0.92	I	ng/L	P371188	
		Atrazine Desethyl	1.5	UJ	ng/L	P371188	RPD
		Azinphos Methyl	4.9	U	ng/L	P371188	
		Bromacil	0.87	I	ng/L	P371188	
		Butylate	0.39	U	ng/L	P371188	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P371188	
		Chlorpyrifos Methyl	0.097	U	ng/L	P371188	
		Cyanazine	3.2	UJ	ng/L	P371188	RPD
		Demeton	6.8	U	ng/L	P371188	
		Diazinon	0.12	U	ng/L	P371188	
		Dimethenamid**	0.097	U	ng/L	P371188	
		Disulfoton	0.49	U	ng/L	P371188	
		Dithiopyr**	0.097	U	ng/L	P371188	
		EPTC	1.2	U	ng/L	P371188	
		Ethion	0.15	U	ng/L	P371188	
		Ethoprop	0.097	U	ng/L	P371188	
		Fenamiphos	0.49	U	ng/L	P371188	
		Fipronil	0.24	U	ng/L	P371188	
		Fipronil Desulfinyl**	0.17	I	ng/L	P371188	
		Fipronil Sulfide	0.20	I	ng/L	P371188	
		Fipronil Sulfone	0.27	I	ng/L	P371188	

Field ID: G2NE1191 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2121032	EPA 8270E	Fonofos	0.19	U	ng/L	P371188	
		Hexazinone	0.49	U	ng/L	P371188	
		Malathion	0.34	U	ng/L	P371188	
		Metalaxyl	0.29	U	ng/L	P371188	
		Metolachlor	0.49	U	ng/L	P371188	
		Metribuzin	0.73	UJ	ng/L	P371188	RPD
		Mevinphos	0.49	U	ng/L	P371188	
		Molinate	0.29	U	ng/L	P371188	
		Norflurazon	0.49	U	ng/L	P371188	
		Oxadiazon**	0.11	I	ng/L	P371188	
		Parathion Ethyl	0.24	U	ng/L	P371188	
		Parathion Methyl	0.53	U	ng/L	P371188	
		Pendimethalin	0.97	U	ng/L	P371188	
		Phorate	0.24	U	ng/L	P371188	
		Prodiamine**	0.17	U	ng/L	P371188	
		Prometon	1.8	I	ng/L	P371188	
		Prometryn	0.19	U	ng/L	P371188	
		Simazine	0.76	I	ng/L	P371188	
		Tebuconazole**	3.0	J	ng/L	P371188	RPD
		Terbufos	0.097	U	ng/L	P371188	
		Terbuthylazine	0.41	U	ng/L	P371188	

Ref. Method and Comment:
EPA 180.1 Rev. 2.0: The result was confirmed on 09/19/2019.
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The result was confirmed on 09/23/2019.
EPA 8321B: J - second source check standards for some analytes were not available for analysis. Refer to the narrative for an explanation of QC Codes.
EPA 200.8 Rev. 5.4: The lead result was confirmed on 10/16/2019.
EPA 8270E: Refer to the narrative for an explanation of QC Codes.

Sample Location: Cedar at Picketville Rd. Duplicate **Collection Date/Time: 09/18/2019 09:30**

Field ID: G2NE1191DUP Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2121005	EPA 180.1 Rev. 2.0	Turbidity	8.8		NTU	P371017	
	EPA 300.0 Rev. 2.1	Chloride	35		mg Cl/L	P371223	
		Sulfate	15		mg SO4/L	P371226	
	SM 2120 B	Color (true)	140		PCU	P371012	
	SM 2320 B-97	Total Alkalinity	55		mg CaCO3/L	P371526	
	SM 2540 C-97	TDS	183		mg/L	P371353	
	SM 2540 D-97	TSS	5	I	mg/L	P371273	
	SM 4500 F-C-97	Fluoride	0.093	I	mg F/L	P371530	
2121007	EPA 350.1 Rev. 2.0	Ammonia-N	0.037		mg N/L	P371592	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.68		mg N/L	P371285	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.056		mg N/L	P371291	
	EPA 365.1 Rev. 2.0	Total-P	0.046		mg P/L	P371552	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P371180	
2121009	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.018		mg P/L	P371007	
2121021	EPA 8321B	Acesulfame K**	0.37	I	ug/L	P371101	
		2,4-D	0.0020	U	ug/L	P370852	MS
		AMPA**	0.26	I	ug/L	P371101	
		Sucralose**	0.43		ug/L	P371101	
		Acetaminophen**	0.0080	U	ug/L	P370852	
		Acetamiprid**	0.0020	U	ug/L	P370852	
		Endothall**	0.25	U	ug/L	P371101	
		Glufosinate**	0.10	U	ug/L	P371101	
		Glyphosate**	0.15	I	ug/L	P371101	
		Afidopyropen**	0.0020	UJ	ug/L	P370852	
		Bentazon	0.0093		ug/L	P370852	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P370852	
		Carbamazepine**	8.0E-04	U	ug/L	P370852	
		Clothianidin**	0.0049	I	ug/L	P370852	
		Dinotefuran**	0.0020	U	ug/L	P370852	
		Diuron	0.0020	U	ug/L	P370852	
		Fenuron	0.016	U	ug/L	P370852	
		Fluridone**	0.0022	I	ug/L	P370852	
		Imazapyr**	0.10		ug/L	P370852	
		Hydrocodone**	0.0020	U	ug/L	P370852	
		Ibuprofen**	0.020	U	ug/L	P370852	
		Imidacloprid	0.0020	U	ug/L	P370852	MS
		Linuron	0.0040	U	ug/L	P370852	
		Mandestrobin**	0.0020	UJ	ug/L	P370852	
		MCPP	0.0020	UJ	ug/L	P370852	LCS, MS
		Naproxen**	0.0080	U	ug/L	P370852	
		Primidone**	0.0040	U	ug/L	P370852	
		Pyraclostrobin**	0.0020	U	ug/L	P370852	
		Thiamethoxam**	0.0020	U	ug/L	P370852	

Field ID: G2NE1191DUP Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2121021	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P370852	
		Triclopyr**	0.0040	U	ug/L	P370852	
2121030	EPA 200.7 Rev. 4.4	Barium	37.4		ug/L	P371231	
		Calcium	25.4		mg/L	P371231	
		Iron	790		ug/L	P371231	
		Magnesium	4.09		mg/L	P371231	
		Potassium	1.9		mg/L	P371231	
		Sodium	22.9		mg/L	P371231	
		Zinc	5.5	I	ug/L	P372214	
	EPA 200.8 Rev. 5.4	Aluminum	207		ug/L	P371231	
		Antimony	0.12	I	ug/L	P371231	
		Arsenic	1.49		ug/L	P371231	
		Boron**	42.1		ug/L	P371231	
		Cadmium	0.020	U	ug/L	P371231	
		Chromium	0.63	I	ug/L	P371231	
		Copper	0.90		ug/L	P371231	
		Lead	0.61		ug/L	P371231	
		Nickel	0.78	I	ug/L	P371231	
		Selenium	0.20	I	ug/L	P371231	
		Silver	0.010	U	ug/L	P371231	
		Thallium	0.10	U	ug/L	P371231	
2121033	EPA 8270E	Acetochlor	0.26	U	ng/L	P371188	
		Alachlor	0.26	U	ng/L	P371188	
		Ametryn	0.61	U	ng/L	P371188	
		Atrazine	1.0		ng/L	P371188	
		Atrazine Desethyl	1.5	UJ	ng/L	P371188	RPD
		Azinphos Methyl	5.1	U	ng/L	P371188	
		Bromacil	1.1	I	ng/L	P371188	
		Butylate	0.41	U	ng/L	P371188	
		Chlorpyrifos Ethyl	0.26	U	ng/L	P371188	
		Chlorpyrifos Methyl	0.10	U	ng/L	P371188	
		Cyanazine	3.3	UJ	ng/L	P371188	RPD
		Demeton	7.1	U	ng/L	P371188	
		Diazinon	0.13	U	ng/L	P371188	
		Dimethenamid**	0.10	U	ng/L	P371188	
		Disulfoton	0.51	U	ng/L	P371188	
		Dithiopyr**	0.10	U	ng/L	P371188	
		EPTC	1.3	U	ng/L	P371188	
		Ethion	0.15	U	ng/L	P371188	
		Ethoprop	0.10	U	ng/L	P371188	
		Fenamiphos	0.51	U	ng/L	P371188	
		Fipronil	0.26	U	ng/L	P371188	
		Fipronil Desulfinyl**	0.19	I	ng/L	P371188	
		Fipronil Sulfide	0.20	I	ng/L	P371188	
		Fipronil Sulfone	0.26	I	ng/L	P371188	

Field ID: G2NE1191DUP Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2121033	EPA 8270E	Fonofos	0.20	U	ng/L	P371188	
		Hexazinone	0.51	U	ng/L	P371188	
		Malathion	0.36	U	ng/L	P371188	
		Metalaxyl	0.31	U	ng/L	P371188	
		Metolachlor	0.51	U	ng/L	P371188	
		Metribuzin	0.77	UJ	ng/L	P371188	RPD
		Mevinphos	0.51	U	ng/L	P371188	
		Molinate	0.31	U	ng/L	P371188	
		Norflurazon	0.51	U	ng/L	P371188	
		Oxadiazon**	0.13	I	ng/L	P371188	
		Parathion Ethyl	0.26	U	ng/L	P371188	
		Parathion Methyl	0.56	U	ng/L	P371188	
		Pendimethalin	1.0	U	ng/L	P371188	
		Phorate	0.26	U	ng/L	P371188	
		Prodiamine**	0.18	U	ng/L	P371188	
		Prometon	1.8	I	ng/L	P371188	
		Prometryn	0.20	U	ng/L	P371188	
		Simazine	0.74	I	ng/L	P371188	
		Tebuconazole**	3.3	J	ng/L	P371188	RPD
		Terbufos	0.10	U	ng/L	P371188	
		Terbuthylazine	0.43	U	ng/L	P371188	

Ref. Method and Comment:
EPA 180.1 Rev. 2.0: The result was confirmed on 09/19/2019.
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The result was confirmed on 09/23/2019.
EPA 8321B: J - second source check standards for some analytes were not available for analysis. Refer to the narrative for an explanation of QC Codes.
EPA 200.8 Rev. 5.4: The lead result was confirmed on 10/16/2019.
EPA 8270E: Refer to the narrative for an explanation of QC Codes.

Sample Location: Cedar at Picketville Rd. **Collection Date/Time: 09/18/2019 09:40**

Field ID: FB091819 Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2121010	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P371017	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P371223	
		Sulfate	0.20	U	mg SO4/L	P371226	
	SM 2120 B	Color (true)	2.5	U	PCU	P371012	
	SM 2320 B-97	Total Alkalinity	0.65	UY	mg CaCO3/L	P371526	
	SM 2540 C-97	TDS	15	U	mg/L	P371353	
	SM 2540 D-97	TSS	2	U	mg/L	P371273	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P371530	
2121011	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P371592	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P371285	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P371291	
	EPA 365.1 Rev. 2.0	Total-P	0.003	I	mg P/L	P371166	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P371180	
2121012	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P371007	
2121022	EPA 8321B	Acesulfame K**	0.10	U	ug/L	P371101	
		2,4-D	0.0020	UJ	ug/L	P370852	MS, SUR
		AMPA**	0.10	U	ug/L	P371101	
		Sucralose**	0.010	U	ug/L	P371101	
		Acetaminophen**	0.0080	U	ug/L	P370852	
		Acetamiprid**	0.0020	U	ug/L	P370852	
		Endothall**	0.25	U	ug/L	P371101	
		Glufosinate**	0.10	U	ug/L	P371101	
		Glyphosate**	0.10	U	ug/L	P371101	
		Afidopyropen**	0.0020	UJ	ug/L	P370852	
		Bentazon	8.0E-04	UJ	ug/L	P370852	SUR
		Benzovindiflupyr**	0.0020	UJ	ug/L	P370852	
		Carbamazepine**	8.0E-04	U	ug/L	P370852	
		Clothianidin**	0.0020	U	ug/L	P370852	
		Dinotefuran**	0.0020	U	ug/L	P370852	
		Diuron	0.0020	U	ug/L	P370852	
		Fenuron	0.016	U	ug/L	P370852	
		Fluridone**	8.0E-04	U	ug/L	P370852	
		Imazapyr**	0.0040	U	ug/L	P370852	
		Hydrocodone**	0.0020	U	ug/L	P370852	
		Ibuprofen**	0.020	U	ug/L	P370852	
		Imidacloprid	0.0020	U	ug/L	P370852	MS
		Linuron	0.0040	U	ug/L	P370852	
		Mandestrobin**	0.0020	UJ	ug/L	P370852	
		MCPP	0.0020	UJ	ug/L	P370852	LCS, MS, SUR
		Naproxen**	0.0080	U	ug/L	P370852	
		Primidone**	0.0040	U	ug/L	P370852	
		Pyraclostrobin**	0.0020	U	ug/L	P370852	
		Thiamethoxam**	0.0020	U	ug/L	P370852	

Field ID: FB091819 Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2121022	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P370852	
		Triclopyr**	0.0040	UJ	ug/L	P370852	SUR
2121031	EPA 200.7 Rev. 4.4	Barium	1.0	U	ug/L	P371231	
		Calcium	0.075	U	mg/L	P371231	
		Iron	30	U	ug/L	P371231	
		Magnesium	0.040	U	mg/L	P371231	
		Potassium	0.30	U	mg/L	P371231	
		Sodium	0.50	U	mg/L	P371231	
		Zinc	5.0	U	ug/L	P371231	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P371231	
		Antimony	0.050	U	ug/L	P371231	
		Arsenic	0.050	U	ug/L	P371231	
		Boron**	2.0	U	ug/L	P371231	
		Cadmium	0.020	U	ug/L	P371231	
		Chromium	0.40	U	ug/L	P371231	
		Copper	0.40	U	ug/L	P371231	
		Lead	0.20	U	ug/L	P371231	
		Nickel	0.50	U	ug/L	P371231	
		Selenium	0.20	U	ug/L	P371231	
		Silver	0.010	U	ug/L	P371231	
		Thallium	0.10	U	ug/L	P371231	
2121034	EPA 8270E	Acetochlor	0.25	U	ng/L	P371188	
		Alachlor	0.25	U	ng/L	P371188	
		Ametryn	0.60	U	ng/L	P371188	
		Atrazine	0.25	U	ng/L	P371188	
		Atrazine Desethyl	1.5	UJ	ng/L	P371188	RPD
		Azinphos Methyl	5.0	U	ng/L	P371188	
		Bromacil	0.50	U	ng/L	P371188	
		Butylate	0.40	U	ng/L	P371188	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P371188	
		Chlorpyrifos Methyl	0.10	U	ng/L	P371188	
		Cyanazine	3.3	UJ	ng/L	P371188	RPD
		Demeton	7.1	U	ng/L	P371188	
		Diazinon	0.13	U	ng/L	P371188	
		Dimethenamid**	0.10	U	ng/L	P371188	
		Disulfoton	0.50	U	ng/L	P371188	
		Dithiopyr**	0.10	U	ng/L	P371188	
		EPTC	1.3	U	ng/L	P371188	
		Ethion	0.15	U	ng/L	P371188	
		Ethoprop	0.10	U	ng/L	P371188	
		Fenamiphos	0.50	U	ng/L	P371188	
		Fipronil	0.25	U	ng/L	P371188	
		Fipronil Desulfinyl**	0.13	U	ng/L	P371188	
		Fipronil Sulfide	0.15	U	ng/L	P371188	
		Fipronil Sulfone	0.15	U	ng/L	P371188	

Field ID: FB091819 Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2121034	EPA 8270E	Fonofos	0.20	U	ng/L	P371188	
		Hexazinone	0.50	U	ng/L	P371188	
		Malathion	0.35	U	ng/L	P371188	
		Metalaxyl	0.30	U	ng/L	P371188	
		Metolachlor	0.50	U	ng/L	P371188	
		Metribuzin	0.76	UJ	ng/L	P371188	RPD
		Mevinphos	0.50	U	ng/L	P371188	
		Molinate	0.30	U	ng/L	P371188	
		Norflurazon	0.50	U	ng/L	P371188	
		Oxadiazon**	0.10	U	ng/L	P371188	
		Parathion Ethyl	0.25	U	ng/L	P371188	
		Parathion Methyl	0.55	U	ng/L	P371188	
		Pendimethalin	1.0	U	ng/L	P371188	
		Phorate	0.25	U	ng/L	P371188	
		Prodiamine**	0.18	U	ng/L	P371188	
		Prometon	0.91	U	ng/L	P371188	
		Prometryn	0.20	U	ng/L	P371188	
		Simazine	0.50	U	ng/L	P371188	
		Tebuconazole**	0.50	UJ	ng/L	P371188	RPD
		Terbufos	0.10	U	ng/L	P371188	
		Terbuthylazine	0.43	U	ng/L	P371188	

Ref. Method and Comment:
SM 2320 B-97: Sample was left out at room temperature overnight, should be stored below 6 degC.
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: The result was confirmed on 10/01/2019.
EPA 8321B: Refer to the narrative for an explanation of QC Codes. J - second source check standards for some analytes were not available for analysis. Surrogate spike recovery exceeding the control limits.
EPA 8270E: Refer to the narrative for an explanation of QC Codes.

Non-Conformance Report

NCR ID: 7939

Event(s)	Job(s)	Sample(s)	Test(s)
NE-DIST-2019-09-19-01	TLH-2019-09-19-38	2121010	

NCR Type: SHIPPING/RECEIVING **NCR Category: Preservation Not Intact**

Observation: Samples stored outside of the acceptable temperature range overnight.

Resolution: Samples returned to refrigerator on 9/24/19 @ 08:40. Data will be qualified as appropriate when analyzed after this date/time.

Authorized by/Date: Irina Carbone 10/11/2019

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

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P371017

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P371231

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P372214

Component	Result	Code	Units
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P371231

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371223

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371226

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: P371592

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371285

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371291

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371166

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371552

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371007

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

Reference Method: EPA 8270E
Batch ID: P371188

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	5.0	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L
Cyanazine	3.2	U	ng/L
Demeton	7.0	U	ng/L
Diazinon	0.12	U	ng/L
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.10	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P371188

Component	Result	Code	Units
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.50	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.30	U	ng/L
Metolachlor	0.50	U	ng/L
Metribuzin	0.75	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.10	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8321B
Batch ID: P370852

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P370852

Component	Result	Code	Units
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P371101

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P371012

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P371526

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

Reference Method: SM 2540 C-97
Batch ID: P371353

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P371273

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P371530

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: P371180

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: P371231

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	104		P	85 - 115
Calcium	109		P	85 - 115
Iron	107		P	85 - 115
Magnesium	111		P	85 - 115
Potassium	103		P	85 - 115
Sodium	108		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P372214

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Zinc	95.9		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P371231

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.0		P	85 - 115
Antimony	98.4		P	85 - 115
Arsenic	98.5		P	85 - 115
Boron	102		P	85 - 115
Cadmium	100		P	85 - 115
Chromium	93.8		P	85 - 115
Copper	97.1		P	85 - 115
Lead	92.5		P	85 - 115
Nickel	96.7		P	85 - 115
Selenium	95.6		P	85 - 115
Silver	98.5		P	85 - 115
Thallium	99.5		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371223

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371226

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371592

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371285

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371291

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371166

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371552

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: P371007

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

Reference Method: EPA 8270E
Batch ID: P371188

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	99.5	90.1	P/P	69 - 122
Alachlor	98.0	87.1	P/P	71 - 120
Ametryn	109	94.7	P/P	47 - 138
Atrazine	105	99.0	P/P	74 - 124
Atrazine Desethyl	105	69.7	P/P	38 - 138
Azinphos Methyl	124	111	P/P	69 - 154
Bromacil	80.3	73.0	P/P	39 - 121
Butylate	63.9	83.0	P/P	27 - 87.0
Chlorpyrifos Ethyl	98.5	91.5	P/P	69 - 118
Chlorpyrifos Methyl	105	86.2	P/P	70 - 120
Cyanazine	133	86.0	P/P	20 - 250
Demeton	81.9	72.4	P/P	39 - 118
Diazinon	108	91.1	P/P	68 - 127
Dimethenamid	99.9	87.5	P/P	66 - 125
Disulfoton	97.7	78.2	P/P	52 - 126
Dithiopyr	99.4	92.0	P/P	67 - 127
EPTC	64.1	58.9	P/P	24 - 88.0
Ethion	77.1	99.6	P/P	51 - 132
Ethoprop	96.3	75.4	P/P	58 - 117
Fenamiphos	104	90.1	P/P	38 - 139
Fipronil	104	78.5	P/P	61 - 124
Fipronil Desulfinyl	85.3	81.1	P/P	47 - 120

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P371188

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fipronil Sulfide	89.0	82.1	P/P	56 - 119
Fipronil Sulfone	80.1	62.7	P/P	50 - 117
Fonofos	98.2	74.2	P/P	60 - 121
Hexazinone	100	99.8	P/P	55 - 137
Malathion	97.3	95.4	P/P	66 - 126
Metalaxyl	93.0	91.0	P/P	33 - 140
Metolachlor	96.2	91.1	P/P	69 - 119
Metribuzin	203	106	P/P	31 - 238
Mevinphos	89.4	71.9	P/P	42 - 113
Molinate	78.8	68.0	P/P	32 - 96.0
Norflurazon	104	94.4	P/P	54 - 123
Oxadiazon	99.8	98.3	P/P	63 - 128
Parathion Ethyl	97.8	91.9	P/P	72 - 111
Parathion Methyl	106	92.5	P/P	74 - 126
Pendimethalin	90.7	87.9	P/P	61 - 131
Phorate	97.6	82.8	P/P	51 - 115
Prodiamine	79.6	87.2	P/P	38 - 144
Prometon	95.0	87.4	P/P	54 - 119
Prometryn	108	92.6	P/P	63 - 120
Simazine	106	96.4	P/P	75 - 126
Tebuconazole	62.4	92.3	P/P	20 - 119
Terbufos	101	79.2	P/P	64 - 116
Terbuthylazine	96.9	101	P/P	73 - 117

Reference Method: EPA 8321B
Batch ID: P370852

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	137		P	40 - 160
Acetaminophen	82.5		P	30 - 160
Acetamiprid	101		P	40 - 160
Afidopyropen	103		P	40 - 160
Bentazon	114		P	30 - 160
Benzovindiflupyr	94.8		P	40 - 160
Carbamazepine	106		P	40 - 160
Clothianidin	94.7		P	40 - 160
Dinotefuran	88.9		P	40 - 160
Diuron	106		P	40 - 160
Fenuron	102		P	40 - 160
Fluridone	97.8		P	40 - 160
Hydrocodone	99.1		P	40 - 160
Ibuprofen	96.6		P	30 - 160
Imazapyr	89.4		P	40 - 160
Imidacloprid	106		P	40 - 160
Linuron	82.1		P	40 - 160
Mandestrobin	94.5		P	40 - 160
MCPP	160		F	40 - 160
Naproxen	94.4		P	40 - 160
Primidone	92.1		P	40 - 160
Pyraclostrobin	92.8		P	30 - 160
Thiamethoxam	96.7		P	40 - 160
Tolfenpyrad	69.9		P	40 - 160

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P370852

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Triclopyr	139		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P371101

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	126		P	40 - 150
AMPA	89.5		P	40 - 150
Endothall	83.5		P	40 - 150
Glufosinate	88.1		P	40 - 150
Glyphosate	77.0		P	40 - 140
Sucralose	109		P	40 - 150

Reference Method: SM 2120 B
Batch ID: P371012

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P371526

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P371530

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.9		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P371180

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.2		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P371231

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2121052	Barium	105		P	80 - 120
2121052	Calcium	105		P	80 - 120
2121052	Iron	109		P	80 - 120
2121052	Magnesium	105		P	80 - 120
2121052	Potassium	101		P	80 - 120
2121052	Sodium	106		P	80 - 120
2121052	Zinc	103		P	80 - 120
2121216	Barium	104	106	P/P	80 - 120
2121216	Calcium	110	108	P/P	80 - 120
2121216	Iron	108	107	P/P	80 - 120
2121216	Magnesium	113	110	P/P	80 - 120
2121216	Potassium	108	106	P/P	80 - 120
2121216	Sodium	106		P	80 - 120
2121216	Zinc	103	105	P/P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P372214

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2125620	Zinc	96.4	96.4	P/P	80 - 120
2125652	Zinc	94.0		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P371231

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2121052	Aluminum	104		P	80 - 120
2121052	Antimony	104		P	80 - 120
2121052	Arsenic	104		P	80 - 120
2121052	Boron	109		P	80 - 120
2121052	Cadmium	106		P	80 - 120
2121052	Chromium	102		P	80 - 120
2121052	Copper	100		P	80 - 120
2121052	Lead	99.6		P	80 - 120
2121052	Nickel	102		P	80 - 120
2121052	Selenium	101		P	80 - 120
2121052	Silver	102		P	80 - 120
2121052	Thallium	110		P	80 - 120
2121216	Aluminum	107	107	P/P	80 - 120
2121216	Antimony	106	104	P/P	80 - 120
2121216	Arsenic	106	105	P/P	80 - 120
2121216	Boron	108	109	P/P	80 - 120
2121216	Cadmium	106	105	P/P	80 - 120
2121216	Chromium	101	102	P/P	80 - 120
2121216	Copper	105	105	P/P	80 - 120
2121216	Lead	102	99.5	P/P	80 - 120
2121216	Nickel	104	103	P/P	80 - 120
2121216	Selenium	103	101	P/P	80 - 120
2121216	Silver	104	103	P/P	80 - 120
2121216	Thallium	111	110	P/P	80 - 120

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371223

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2120952	Chloride	98.8		P	90 - 110
2121005	Chloride	99.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371226

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2120952	Sulfate	101		P	90 - 110
2121005	Sulfate	100		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371592

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2120969	Ammonia-N	98.8	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371285

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2120969	Kjeldahl Nitrogen	103	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371291

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2121046	NO2NO3-N	102	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371166

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2120966	Total-P	99.2	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371552

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122398	Total-P	96.6	98.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371007

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2121077	O-Phosphate-P	96.2	96.7	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P371188

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2120901	Acetochlor	89.4	100	P/P	63 - 129
2120901	Alachlor	88.7	97.8	P/P	65 - 127

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P371188

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2120901	Ametryn	96.8	97.9	P/P	40 - 164
2120901	Atrazine	96.9	98.5	P/P	66 - 135
2120901	Atrazine Desethyl	73.5	85.5	P/P	14 - 157
2120901	Azinphos Methyl	104	108	P/P	49 - 180
2120901	Bromacil	76.8	80.2	P/P	48 - 130
2120901	Butylate	57.9	56.3	P/P	10 - 94.0
2120901	Chlorpyrifos Ethyl	90.0	91.0	P/P	58 - 123
2120901	Chlorpyrifos Methyl	85.5	91.8	P/P	58 - 125
2120901	Cyanazine	84.7	120	P/P	24 - 253
2120901	Demeton	65.1	77.0	P/P	25 - 149
2120901	Diazinon	86.5	101	P/P	59 - 144
2120901	Dimethenamid	87.7	97.3	P/P	46 - 139
2120901	Disulfoton	74.5	89.5	P/P	54 - 132
2120901	Dithiopyr	92.2	96.2	P/P	64 - 130
2120901	EPTC	58.2	58.2	P/P	10 - 92.0
2120901	Ethion	95.9	92.2	P/P	30 - 148
2120901	Ethoprop	76.6	86.5	P/P	50 - 130
2120901	Fenamiphos	92.6	82.1	P/P	49 - 142
2120901	Fipronil	95.1	97.2	P/P	46 - 140
2120901	Fipronil Desulfinyl	88.4	82.1	P/P	30 - 121
2120901	Fipronil Sulfide	91.7	79.6	P/P	31 - 136
2120901	Fipronil Sulfone	89.7	78.7	P/P	16 - 136
2120901	Fonofos	69.6	82.3	P/P	55 - 129
2120901	Hexazinone	101	94.3	P/P	56 - 141
2120901	Malathion	98.2	97.5	P/P	56 - 135
2120901	Metalaxyl	94.9	96.1	P/P	54 - 135
2120901	Metolachlor	91.4	98.1	P/P	51 - 140
2120901	Metribuzin	96.9	149	P/P	45 - 254
2120901	Mevinphos	78.4	76.9	P/P	33 - 131
2120901	Molinate	67.2	69.6	P/P	14 - 98.0
2120901	Norflurazon	94.9	93.5	P/P	34 - 136
2120901	Oxadiazon	97.0	96.3	P/P	67 - 116
2120901	Parathion Ethyl	89.2	91.2	P/P	66 - 118
2120901	Parathion Methyl	94.2	95.1	P/P	64 - 136
2120901	Pendimethalin	81.5	88.5	P/P	59 - 144
2120901	Phorate	77.8	88.3	P/P	42 - 130
2120901	Prodiamine	92.6	98.2	P/P	42 - 148
2120901	Prometon	92.1	91.2	P/P	59 - 134
2120901	Prometryn	88.2	100	P/P	54 - 135
2120901	Simazine	97.6	96.8	P/P	53 - 156
2120901	Tebuconazole	95.0	73.6	P/P	10 - 131
2120901	Terbufos	75.4	89.2	P/P	57 - 131
2120901	Terbuthylazine	94.1	91.8	P/P	68 - 125

Reference Method: EPA 8321B
Batch ID: P370852

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2120253	2,4-D	165	159	F/P	40 - 160
2120253	Acetaminophen	78.8	77.4	P/P	30 - 160
2120253	Acetamiprid	119	128	P/P	40 - 160
2120253	Afidopyropen	113	108	P/P	40 - 160

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P370852

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2120253	Bentazon	79.6	77.9	P/P	30 - 160
2120253	Benzovindiflupyr	101	102	P/P	40 - 160
2120253	Carbamazepine	101	103	P/P	40 - 160
2120253	Clothianidin	103	107	P/P	40 - 160
2120253	Dinotefuran	116	118	P/P	40 - 160
2120253	Diuron	93.5	88.0	P/P	40 - 160
2120253	Fenuron	97.5	96.4	P/P	40 - 160
2120253	Fluridone	100	98.4	P/P	40 - 160
2120253	Hydrocodone	92.9	110	P/P	40 - 160
2120253	Ibuprofen	103	97.1	P/P	30 - 160
2120253	Imazapyr	128	122	P/P	40 - 160
2120253	Imidacloprid	200	200	F/F	40 - 160
2120253	Linuron	81.8	83.5	P/P	40 - 160
2120253	Mandestrobin	96.7	96.4	P/P	40 - 160
2120253	MCPP	171	167	F/F	40 - 160
2120253	Naproxen	97.9	81.4	P/P	40 - 160
2120253	Primidone	103	109	P/P	40 - 160
2120253	Pyraclostrobin	99.9	94.7	P/P	30 - 160
2120253	Thiamethoxam	144	148	P/P	40 - 160
2120253	Tolfenpyrad	80.6	75.4	P/P	40 - 160
2120253	Triclopyr	127	103	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P371101

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2121020	Acesulfame K	134	134	P/P	40 - 150
2121020	AMPA	46.3	49.7	P/P	40 - 150
2121020	Endothall	81.1	82.8	P/P	40 - 150
2121020	Glufosinate	81.2	80.4	P/P	40 - 150
2121020	Glyphosate	62.9	68.9	P/P	40 - 140
2121020	Sucralose	111	112	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P371530

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2121426	Fluoride	97.6	96.0	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P371180

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2121088	Organic Carbon	95.0	94.4	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P371017

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121084	Turbidity	2.09	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P371231

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121216	Barium	1.73	Spike	P	0 - 20
2121216	Calcium	1.67	Spike	P	0 - 20
2121216	Iron	1.19	Spike	P	0 - 20
2121216	Magnesium	2.09	Spike	P	0 - 20
2121216	Potassium	1.85	Spike	P	0 - 20
2121216	Sodium	0.335	Spike	P	0 - 20
2121216	Zinc	2.02	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P372214

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2125620	Zinc	0.0442	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P371231

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121216	Aluminum	0.685	Spike	P	0 - 20
2121216	Antimony	2.32	Spike	P	0 - 20
2121216	Arsenic	0.549	Spike	P	0 - 20
2121216	Boron	0.250	Spike	P	0 - 20
2121216	Cadmium	0.645	Spike	P	0 - 20
2121216	Chromium	0.981	Spike	P	0 - 20
2121216	Copper	0.0985	Spike	P	0 - 20
2121216	Lead	2.69	Spike	P	0 - 20
2121216	Nickel	0.707	Spike	P	0 - 20
2121216	Selenium	2.02	Spike	P	0 - 20
2121216	Silver	0.586	Spike	P	0 - 20
2121216	Thallium	0.236	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371223

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2120952	Chloride	0.946	Sample	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371226

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2120952	Sulfate	1.11	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371592

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2120969	Ammonia-N	0.0256	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371285

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2120969	Kjeldahl Nitrogen	0.637	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371291

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121046	NO2NO3-N	0.957	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371166

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2120966	Total-P	1.75	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371552

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122398	Total-P	1.31	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371007

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121077	O-Phosphate-P	0.518	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P371188

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2120901	Acetochlor	11.3	Spike	P	0 - 30
2120901	Alachlor	9.84	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P371188

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2120901	Ametryn	1.20	Spike	P	0 - 30
2120901	Atrazine	1.60	Spike	P	0 - 30
2120901	Atrazine Desethyl	15.1	Spike	P	0 - 30
2120901	Azinphos Methyl	3.67	Spike	P	0 - 30
2120901	Bromacil	4.30	Spike	P	0 - 30
2120901	Butylate	2.69	Spike	P	0 - 30
2120901	Chlorpyrifos Ethyl	1.05	Spike	P	0 - 30
2120901	Chlorpyrifos Methyl	7.08	Spike	P	0 - 30
2120901	Cyanazine	34.2	Spike	F	0 - 30
2120901	Demeton	16.7	Spike	P	0 - 30
2120901	Diazinon	15.2	Spike	P	0 - 30
2120901	Dimethenamid	10.3	Spike	P	0 - 30
2120901	Disulfoton	18.2	Spike	P	0 - 30
2120901	Dithiopyr	4.21	Spike	P	0 - 30
2120901	EPTC	0.0661	Spike	P	0 - 30
2120901	Ethion	3.93	Spike	P	0 - 30
2120901	Ethoprop	12.1	Spike	P	0 - 30
2120901	Fenamiphos	12.0	Spike	P	0 - 30
2120901	Fipronil	2.12	Spike	P	0 - 30
2120901	Fipronil Desulfinyl	7.34	Spike	P	0 - 30
2120901	Fipronil Sulfide	14.2	Spike	P	0 - 30
2120901	Fipronil Sulfone	13.0	Spike	P	0 - 30
2120901	Fonofos	16.7	Spike	P	0 - 30
2120901	Hexazinone	7.33	Spike	P	0 - 30
2120901	Malathion	0.670	Spike	P	0 - 30
2120901	Metalaxyl	1.28	Spike	P	0 - 30
2120901	Metolachlor	7.13	Spike	P	0 - 30
2120901	Metribuzin	42.4	Spike	F	0 - 30
2120901	Mevinphos	1.96	Spike	P	0 - 30
2120901	Molinate	3.53	Spike	P	0 - 30
2120901	Norflurazon	1.53	Spike	P	0 - 30
2120901	Oxadiazon	0.678	Spike	P	0 - 30
2120901	Parathion Ethyl	2.30	Spike	P	0 - 30
2120901	Parathion Methyl	0.996	Spike	P	0 - 30
2120901	Pendimethalin	8.19	Spike	P	0 - 30
2120901	Phorate	12.6	Spike	P	0 - 30
2120901	Prodiamine	5.95	Spike	P	0 - 30
2120901	Prometon	1.05	Spike	P	0 - 30
2120901	Prometryn	12.6	Spike	P	0 - 30
2120901	Simazine	0.805	Spike	P	0 - 30
2120901	Tebuconazole	25.4	Spike	P	0 - 30
2120901	Terbufos	16.7	Spike	P	0 - 30
2120901	Terbuthylazine	2.49	Spike	P	0 - 30
LFB	Acetochlor	9.82	LCS	P	0 - 30
LFB	Alachlor	11.8	LCS	P	0 - 30
LFB	Ametryn	13.6	LCS	P	0 - 30
LFB	Atrazine	6.07	LCS	P	0 - 30
LFB	Atrazine Desethyl	40.6	LCS	F	0 - 30
LFB	Azinphos Methyl	10.9	LCS	P	0 - 30
LFB	Bromacil	9.51	LCS	P	0 - 30
LFB	Butylate	25.9	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P371188

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Chlorpyrifos Ethyl	7.36	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	19.2	LCS	P	0 - 30
LFB	Cyanazine	42.9	LCS	F	0 - 30
LFB	Demeton	12.3	LCS	P	0 - 30
LFB	Diazinon	16.5	LCS	P	0 - 30
LFB	Dimethenamid	13.3	LCS	P	0 - 30
LFB	Disulfoton	22.1	LCS	P	0 - 30
LFB	Dithiopyr	7.75	LCS	P	0 - 30
LFB	EPTC	8.48	LCS	P	0 - 30
LFB	Ethion	25.5	LCS	P	0 - 30
LFB	Ethoprop	24.4	LCS	P	0 - 30
LFB	Fenamiphos	14.8	LCS	P	0 - 30
LFB	Fipronil	27.9	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	5.08	LCS	P	0 - 30
LFB	Fipronil Sulfide	8.04	LCS	P	0 - 30
LFB	Fipronil Sulfone	24.3	LCS	P	0 - 30
LFB	Fonofos	27.8	LCS	P	0 - 30
LFB	Hexazinone	0.656	LCS	P	0 - 30
LFB	Malathion	2.03	LCS	P	0 - 30
LFB	Metalaxyl	2.14	LCS	P	0 - 30
LFB	Metolachlor	5.44	LCS	P	0 - 30
LFB	Metribuzin	62.6	LCS	F	0 - 30
LFB	Mevinphos	21.6	LCS	P	0 - 30
LFB	Molinate	14.8	LCS	P	0 - 30
LFB	Norflurazon	10.0	LCS	P	0 - 30
LFB	Oxadiazon	1.49	LCS	P	0 - 30
LFB	Parathion Ethyl	6.22	LCS	P	0 - 30
LFB	Parathion Methyl	13.6	LCS	P	0 - 30
LFB	Pendimethalin	3.16	LCS	P	0 - 30
LFB	Phorate	16.4	LCS	P	0 - 30
LFB	Prodiamine	9.08	LCS	P	0 - 30
LFB	Prometon	8.25	LCS	P	0 - 30
LFB	Prometryn	15.6	LCS	P	0 - 30
LFB	Simazine	8.98	LCS	P	0 - 30
LFB	Tebuconazole	38.7	LCS	F	0 - 30
LFB	Terbufos	24.2	LCS	P	0 - 30
LFB	Terbuthylazine	4.00	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P370852

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2120253	2,4-D	3.54	Spike	P	0 - 30
2120253	Acetaminophen	1.85	Spike	P	0 - 30
2120253	Acetamiprid	6.75	Spike	P	0 - 30
2120253	Afidopyropen	3.85	Spike	P	0 - 30
2120253	Bentazon	1.54	Spike	P	0 - 30
2120253	Benzovindiflupyr	1.71	Spike	P	0 - 30
2120253	Carbamazepine	1.32	Spike	P	0 - 30
2120253	Clothianidin	2.98	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P370852

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2120253	Dinotefuran	2.24	Spike	P	0 - 30
2120253	Diuron	2.90	Spike	P	0 - 30
2120253	Fenuron	1.19	Spike	P	0 - 30
2120253	Fluridone	1.23	Spike	P	0 - 30
2120253	Hydrocodone	17.0	Spike	P	0 - 30
2120253	Ibuprofen	5.55	Spike	P	0 - 30
2120253	Imazapyr	3.29	Spike	P	0 - 30
2120253	Imidacloprid	0.125	Spike	P	0 - 30
2120253	Linuron	2.04	Spike	P	0 - 30
2120253	Mandestrobin	0.256	Spike	P	0 - 30
2120253	MCPP	2.62	Spike	P	0 - 30
2120253	Naproxen	18.5	Spike	P	0 - 30
2120253	Primidone	5.38	Spike	P	0 - 30
2120253	Pyraclostrobin	5.39	Spike	P	0 - 30
2120253	Thiamethoxam	3.06	Spike	P	0 - 30
2120253	Tolfenpyrad	6.67	Spike	P	0 - 30
2120253	Triclopyr	20.8	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P371101

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121020	Acesulfame K	0.412	Spike	P	0 - 30
2121020	AMPA	4.62	Spike	P	0 - 30
2121020	Endothall	2.08	Spike	P	0 - 30
2121020	Glufosinate	1.02	Spike	P	0 - 30
2121020	Glyphosate	7.20	Spike	P	0 - 30
2121020	Sucralose	0.217	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P371012

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121075	Color (true)	1.61	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P371526

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121426	Total Alkalinity	0.129	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
Batch ID: P371353

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121045-d1	TDS	1.32	Sample	P	0 - 10

Quality Assurance Report
Precision

Reference Method: SM 4500 F-C-97
Batch ID: P371530

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121426	Fluoride	1.41	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P371180

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121088	Organic Carbon	0.464	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.

Quality Assurance Report
Surrogates

Lab Sample ID: 2121020
Field Sample ID: G2NE1191

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	142	P	30 - 160
EPA 8321B	Acetaminophen-d4	73.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	78.6	P	30 - 160
EPA 8321B	Diuron-d6	75.1	P	30 - 160
EPA 8321B	Endothall-d6	113	P	30 - 160
EPA 8321B	Endothall-d6	113	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	79.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	79.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	81.7	P	30 - 160
EPA 8321B	Primidone-d5	62.0	P	30 - 160
EPA 8321B	Sucralose-d6	98.5	P	30 - 160
EPA 8321B	Sucralose-d6	98.5	P	30 - 160

Lab Sample ID: 2121021
Field Sample ID: G2NE1191DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	144	P	30 - 160
EPA 8321B	Acetaminophen-d4	75.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	82.0	P	30 - 160
EPA 8321B	Diuron-d6	78.6	P	30 - 160
EPA 8321B	Endothall-d6	123	P	30 - 160
EPA 8321B	Endothall-d6	123	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	79.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	79.8	P	30 - 160
EPA 8321B	Ibuprofen-d3	86.6	P	30 - 160
EPA 8321B	Primidone-d5	83.2	P	30 - 160
EPA 8321B	Sucralose-d6	98.8	P	30 - 160
EPA 8321B	Sucralose-d6	98.8	P	30 - 160

Lab Sample ID: 2121022
Field Sample ID: FB091819

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	169	F	30 - 160
EPA 8321B	Acetaminophen-d4	90.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	109	P	30 - 160
EPA 8321B	Diuron-d6	107	P	30 - 160
EPA 8321B	Endothall-d6	105	P	30 - 160
EPA 8321B	Endothall-d6	105	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	93.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	93.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	93.2	P	30 - 160
EPA 8321B	Primidone-d5	111	P	30 - 160
EPA 8321B	Sucralose-d6	117	P	30 - 160
EPA 8321B	Sucralose-d6	117	P	30 - 160

Lab Sample ID: 2121032
Field Sample ID: G2NE1191

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	118	P	68 - 130

Quality Assurance Report
Surrogates

Lab Sample ID: 2121032
Field Sample ID: G2NE1191

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Terbufos-d10	91.3	P	61 - 136

Lab Sample ID: 2121033
Field Sample ID: G2NE1191DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	106	P	68 - 130
EPA 8270E	Terbufos-d10	108	P	61 - 136

Lab Sample ID: 2121034
Field Sample ID: FB091819

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	106	P	68 - 130
EPA 8270E	Terbufos-d10	94.3	P	61 - 136

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A94346
Included Lab Sample IDs: 2121008, 2121009, 2121012

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

Reference Method: SM 2120 B
Run ID: A94347
Included Lab Sample IDs: 2121004, 2121005, 2121010

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	101	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A94348
Included Lab Sample IDs: 2121004, 2121005, 2121010

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	100	P/P	95 - 105

Reference Method: EPA 8321B
Run ID: A94410
Included Lab Sample IDs: 2121020, 2121021, 2121022

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	89.6	90.8	P/P	50 - 150
Acetaminophen	112	96.5	P/P	60 - 160
Acetamiprid	110	116	P/P	50 - 150
Afidopyropen	95.9	113	P/P	50 - 150
Bentazon	110	114	P/P	50 - 160
Benzovindiflupyr	107	106	P/P	50 - 150
Carbamazepine	105	107	P/P	60 - 150
Clothianidin	99.7	101	P/P	60 - 150
Dinotefuran	99.3	105	P/P	50 - 150
Diuron	110	113	P/P	60 - 150
Fenuron	112	112	P/P	60 - 150
Fluridone	107	111	P/P	60 - 160
Hydrocodone	103	103	P/P	60 - 150
Ibuprofen	107	74.3	P/P	50 - 160
Imazapyr	101	101	P/P	50 - 150
Imidacloprid	108	102	P/P	60 - 150
Linuron	106	108	P/P	60 - 150
Mandestrobin	110	113	P/P	50 - 150
MCPP	92.6	98.1	P/P	50 - 150
Naproxen	113	79.8	P/P	50 - 160
Primidone	99.9	89.0	P/P	60 - 150
Pyraclostrobin	112	115	P/P	60 - 150
Thiamethoxam	103	101	P/P	50 - 150
Tolfenpyrad	113	113	P/P	60 - 150
Triclopyr	92.6	87.9	P/P	50 - 150

Quality Assurance Report
Calibration Verification

Reference Method: SM 5310 B-00
Run ID: A94418
Included Lab Sample IDs: 2121006, 2121007, 2121011

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.0	99.3	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A94452
Included Lab Sample IDs: 2121004, 2121005, 2121010

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.5	99.4	P/P	90 - 110
Chloride	99.4	99.5	P/P	90 - 110
Sulfate	101	101	P/P	90 - 110
Sulfate	101	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A94456
Included Lab Sample IDs: 2121011

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

Reference Method: EPA 8321B
Run ID: A94467
Included Lab Sample IDs: 2121020, 2121021, 2121022

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	65.4	97.1	P/P	60 - 160
Endothall	100	93.2	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A94489
Included Lab Sample IDs: 2121006, 2121007, 2121011

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

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A94502
Included Lab Sample IDs: 2121029, 2121030, 2121031

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	99.5	102	P/P	90 - 110
Calcium	101	104	P/P	90 - 110
Iron	103	104	P/P	90 - 110
Magnesium	102	104	P/P	90 - 110
Potassium	100	102	P/P	90 - 110
Sodium	101	105	P/P	90 - 110
Zinc	96.4	101	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A94522
Included Lab Sample IDs: 2121020, 2121021, 2121022

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	86.4	69.2	P/P	60 - 160
Glufosinate	78.8	75.0	P/P	60 - 160
Glyphosate	81.6	62.0	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A94540
Included Lab Sample IDs: 2121006, 2121007, 2121011

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	106	105	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A94582
Included Lab Sample IDs: 2121004, 2121005, 2121010

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

Reference Method: SM 4500 F-C-97
Run ID: A94582
Included Lab Sample IDs: 2121004, 2121005, 2121010

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

Reference Method: EPA 8321B
Run ID: A94586
Included Lab Sample IDs: 2121020, 2121021, 2121022

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	105	99.8	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A94610
Included Lab Sample IDs: 2121006, 2121007, 2121011

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A94622
Included Lab Sample IDs: 2121006

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A94659
Included Lab Sample IDs: 2121007

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A94659
Included Lab Sample IDs: 2121007

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

Reference Method: EPA 8270E
Run ID: A94788
Included Lab Sample IDs: 2121032, 2121033, 2121034

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	104		P	80 - 120
Alachlor	104		P	80 - 120
Ametryn	104		P	80 - 120
Atrazine	101		P	80 - 120
Atrazine Desethyl	96.7		P	80 - 120
Azinphos Methyl	104		P	80 - 120
Bromacil	101		P	80 - 120
Butylate	97.4		P	80 - 120
Chlorpyrifos Ethyl	102		P	80 - 120
Chlorpyrifos Methyl	105		P	80 - 120
Cyanazine	93.2		P	80 - 120
Demeton	94.1		P	80 - 120
Diazinon	102		P	80 - 120
Dimethenamid	104		P	80 - 120
Disulfoton	99.5		P	80 - 120
Dithiopyr	103		P	80 - 120
EPTC	98.7		P	80 - 120
Ethion	103		P	80 - 120
Ethoprop	98.9		P	80 - 120
Fenamiphos	97.9		P	80 - 120
Fipronil	100		P	80 - 120
Fipronil Desulfinyl	100		P	80 - 120
Fipronil Sulfide	97.4		P	80 - 120
Fipronil Sulfone	99.0		P	80 - 120
Fonofos	99.4		P	80 - 120
Hexazinone	99.1		P	80 - 120
Malathion	102		P	80 - 120
Metalaxyl	102		P	80 - 120
Metolachlor	109		P	80 - 120
Metribuzin	90.4		P	80 - 120
Mevinphos	104		P	80 - 120
Molinate	95.6		P	80 - 120
Norflurazon	100		P	80 - 120
Oxadiazon	106		P	80 - 120
Parathion Ethyl	97.6		P	80 - 120
Parathion Methyl	98.9		P	80 - 120
Pendimethalin	98.9		P	80 - 120
Phorate	98.0		P	80 - 120
Prodiamine	103		P	80 - 120
Prometon	103		P	80 - 120
Prometryn	103		P	80 - 120
Simazine	99.4		P	80 - 120
Tebuconazole	102		P	80 - 120
Terbufos	98.6		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A94788
Included Lab Sample IDs: 2121032, 2121033, 2121034

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Terbuthylazine	102		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A94813
Included Lab Sample IDs: 2121029

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

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A94867
Included Lab Sample IDs: 2121029, 2121030

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Zinc	99.8	98.3	P/P	90 - 110
Zinc	100	99.8	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A94936
Included Lab Sample IDs: 2121029, 2121030, 2121031

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	102	105	P/P	90 - 110
Antimony	93.9	97.9	P/P	90 - 110
Arsenic	101	103	P/P	90 - 110
Boron	103	106	P/P	90 - 110
Chromium	96.3	99.3	P/P	90 - 110
Copper	101	103	P/P	90 - 110
Lead	93.1	99.9	P/P	90 - 110
Nickel	101	103	P/P	90 - 110
Selenium	101	102	P/P	90 - 110
Silver	97.1	100	P/P	90 - 110
Thallium	91.4	97.6	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A94975
Included Lab Sample IDs: 2121029, 2121030, 2121031

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.5	101	P/P	90 - 110
Cadmium	95.4	97.4	P/P	90 - 110
Copper	100	102	P/P	90 - 110

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

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			Precision		
							LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							2.09	
EPA 200.7 Rev. 4.4	Barium	104		105	104	106			1.73
	Calcium	109		105	110	108			1.67
	Iron	107		109	108	107			1.19
	Magnesium	111		105	113	110			2.09
	Potassium	103		101	108	106			1.85
	Sodium	108		106	106				0.335
	Zinc	101		103	103	105			2.02
	Zinc	95.9		96.4	96.4	94.0			0.0442
EPA 200.8 Rev. 5.4	Aluminum	99.0		104	107	107			0.685
	Antimony	98.4		104	106	104			2.32
	Arsenic	98.5		104	106	105			0.549
	Boron	102		109	108	109			0.250
	Cadmium	100		106	106	105			0.645
	Chromium	93.8		102	101	102			0.981
	Copper	97.1		100	105	105			0.0985
	Lead	92.5		99.6	102	99.5			2.69
	Nickel	96.7		102	104	103			0.707
	Selenium	95.6		101	103	101			2.02
	Silver	98.5		102	104	103			0.586
	Thallium	99.5		110	111	110			0.236
EPA 300.0 Rev. 2.1	Chloride	99.0		98.8	99.7			0.946	
	Sulfate	99.9		101	100			1.11	
EPA 350.1 Rev. 2.0	Ammonia-N	100		98.8	98.8				0.0256
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101		103	103				0.637
EPA 353.2 Rev. 2.0	NO2NO3-N	102		102	101				0.957
EPA 365.1 Rev. 2.0	Total-P	98.6		99.2	101				1.75
	Total-P	100		96.6	98.8				1.31
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102		96.2	96.7				0.518
EPA 8270E	Acetochlor	99.5	90.1	89.4	100		9.82		11.3
	Alachlor	98.0	87.1	88.7	97.8		11.8		9.84
	Ametryn	109	94.7	96.8	97.9		13.6		1.20
	Atrazine	105	99.0	96.9	98.5		6.07		1.60
	Atrazine Desethyl	105	69.7	73.5	85.5		40.6		15.1
	Azinphos Methyl	124	111	104	108		10.9		3.67
	Bromacil	80.3	73.0	76.8	80.2		9.51		4.30
	Butylate	63.9	83.0	57.9	56.3		25.9		2.69
	Chlorpyrifos Ethyl	98.5	91.5	90.0	91.0		7.36		1.05
	Chlorpyrifos Methyl	105	86.2	85.5	91.8		19.2		7.08
	Cyanazine	133	86.0	84.7	120		42.9		34.2
	Demeton	81.9	72.4	65.1	77.0		12.3		16.7
	Diazinon	108	91.1	86.5	101		16.5		15.2
	Dimethenamid	99.9	87.5	87.7	97.3		13.3		10.3
	Disulfoton	97.7	78.2	74.5	89.5		22.1		18.2
	Dithiopyr	99.4	92.0	92.2	96.2		7.75		4.21
	EPTC	64.1	58.9	58.2	58.2		8.48		0.0661
	Ethion	77.1	99.6	95.9	92.2		25.5		3.93
	Ethoprop	96.3	75.4	76.6	86.5		24.4		12.1
	Fenamiphos	104	90.1	92.6	82.1		14.8		12.0
	Fipronil	104	78.5	95.1	97.2		27.9		2.12
	Fipronil Desulfinyl	85.3	81.1	88.4	82.1		5.08		7.34
	Fipronil Sulfide	89.0	82.1	91.7	79.6		8.04		14.2
	Fipronil Sulfone	80.1	62.7	89.7	78.7		24.3		13.0
	Fonofos	98.2	74.2	69.6	82.3		27.8		16.7

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270E	Hexazinone	100	99.8	101	94.3	0.656		7.33
	Malathion	97.3	95.4	98.2	97.5	2.03		0.670
	Metalaxyl	93.0	91.0	94.9	96.1	2.14		1.28
	Metolachlor	96.2	91.1	91.4	98.1	5.44		7.13
	Metribuzin	203	106	96.9	149	62.6		42.4
	Mevinphos	89.4	71.9	78.4	76.9	21.6		1.96
	Molinate	78.8	68.0	67.2	69.6	14.8		3.53
	Norflurazon	104	94.4	94.9	93.5	10.0		1.53
	Oxadiazon	99.8	98.3	97.0	96.3	1.49		0.678
	Parathion Ethyl	97.8	91.9	89.2	91.2	6.22		2.30
	Parathion Methyl	106	92.5	94.2	95.1	13.6		0.996
	Pendimethalin	90.7	87.9	81.5	88.5	3.16		8.19
	Phorate	97.6	82.8	77.8	88.3	16.4		12.6
	Prodiamine	79.6	87.2	92.6	98.2	9.08		5.95
	Prometon	95.0	87.4	92.1	91.2	8.25		1.05
	Prometryn	108	92.6	88.2	100	15.6		12.6
	Simazine	106	96.4	97.6	96.8	8.98		0.805
	Tebuconazole	62.4	92.3	95.0	73.6	38.7		25.4
	Terbufos	101	79.2	75.4	89.2	24.2		16.7
	Terbuthylazine	96.9	101	94.1	91.8	4.00		2.49
EPA 8321B	2,4-D	137		165	159			3.54
	Acesulfame K	126		134	134			0.412
	Acetaminophen	82.5		78.8	77.4			1.85
	Acetamiprid	101		119	128			6.75
	Afidopyropen	103		113	108			3.85
	AMPA	89.5		46.3	49.7			4.62
	Bentazon	114		79.6	77.9			1.54
	Benzovindiflupyr	94.8		101	102			1.71
	Carbamazepine	106		101	103			1.32
	Clothianidin	94.7		103	107			2.98
	Dinotefuran	88.9		116	118			2.24
	Diuron	106		93.5	88.0			2.90
	Endothall	83.5		81.1	82.8			2.08
	Fenuron	102		97.5	96.4			1.19
	Fluridone	97.8		100	98.4			1.23
	Glufosinate	88.1		81.2	80.4			1.02
	Glyphosate	77.0		62.9	68.9			7.20
	Hydrocodone	99.1		92.9	110			17.0
	Ibuprofen	96.6		103	97.1			5.55
	Imazapyr	89.4		128	122			3.29
	Imidacloprid	106		200	200			0.125
	Linuron	82.1		81.8	83.5			2.04
	Mandestrobin	94.5		96.7	96.4			0.256
	MCPP	160		171	167			2.62
	Naproxen	94.4		97.9	81.4			18.5
	Primidone	92.1		103	109			5.38
	Pyraclostrobin	92.8		99.9	94.7			5.39
	Sucralose	109		111	112			0.217
	Thiamethoxam	96.7		144	148			3.06
	Tolfenpyrad	69.9		80.6	75.4			6.67
	Triclopyr	139		127	103			20.8
SM 2120 B	Color (true)	100					1.61	
SM 2320 B-97	Total Alkalinity	101					0.129	
SM 2540 C-97	TDS						1.32	

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
SM 4500 F-C-97	Fluoride	97.9	97.6	96.0			1.41
SM 5310 B-00	Organic Carbon	98.2	95.0	94.4			0.464

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2121004, 2121005, 2121010
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2121029, 2121030, 2121031
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2121029, 2121030, 2121031
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2121004, 2121005, 2121010
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2121004, 2121005, 2121010
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2121006, 2121007, 2121011
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2121006, 2121007, 2121011
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2121006, 2121007, 2121011
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2121006, 2121007, 2121011
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2121008, 2121009, 2121012
EPA 8270E / E31780	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2121032, 2121033, 2121034
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2121020, 2121021, 2121022
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2121020, 2121021, 2121022
SM 2120 B / E31780	True Color measured at 450 nm	2121004, 2121005, 2121010
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2121004, 2121005, 2121010
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2121004, 2121005, 2121010
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2121004, 2121005, 2121010
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2121004, 2121005, 2121010
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2121006, 2121007, 2121011

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	09/19/2019			09/19/2019 15:53	Rosalyn Ballman	2121004, 2121005, 2121010
EPA 200.7 Rev. 4.4	09/19/2019	09/24/2019 15:40	Elliott D. Healy	09/25/2019 14:38	Alexander Thompson	2121031
	09/19/2019	09/24/2019 15:40	Elliott D. Healy	09/25/2019 15:17	Alexander Thompson	2121029
	09/19/2019	09/24/2019 15:40	Elliott D. Healy	09/25/2019 15:24	Alexander Thompson	2121030
	09/19/2019	10/09/2019 16:55	Elliott D. Healy	10/10/2019 14:38	Betina Topolski	2121029
	09/19/2019	10/09/2019 16:55	Elliott D. Healy	10/10/2019 15:08	Betina Topolski	2121030
EPA 200.8 Rev. 5.4	09/19/2019	09/24/2019 15:40	Elliott D. Healy	10/08/2019 20:19	Justin Cutchin	2121029
	09/19/2019	09/24/2019 15:40	Elliott D. Healy	10/14/2019 09:00	Justin Cutchin	2121031
	09/19/2019	09/24/2019 15:40	Elliott D. Healy	10/14/2019 09:19	Justin Cutchin	2121029
	09/19/2019	09/24/2019 15:40	Elliott D. Healy	10/14/2019 09:28	Justin Cutchin	2121030
	09/19/2019	09/24/2019 15:40	Elliott D. Healy	10/15/2019 19:01	Justin Cutchin	2121031
	09/19/2019	09/24/2019 15:40	Elliott D. Healy	10/15/2019 19:20	Justin Cutchin	2121029
	09/19/2019	09/24/2019 15:40	Elliott D. Healy	10/15/2019 19:30	Justin Cutchin	2121030
EPA 300.0 Rev. 2.1	09/19/2019			09/23/2019 19:56	Jhamieka S. Greenwood	2121005
	09/19/2019			09/23/2019 22:34	Jhamieka S. Greenwood	2121004
	09/19/2019			09/23/2019 22:46	Jhamieka S. Greenwood	2121010
EPA 350.1 Rev. 2.0	09/19/2019			09/27/2019 12:27	Ping Hua	2121006
	09/19/2019			09/27/2019 12:29	Ping Hua	2121007
	09/19/2019			09/27/2019 12:36	Ping Hua	2121011
EPA 351.2 Rev. 2.0	09/19/2019	09/25/2019 13:28	Sima Feizi	09/26/2019 14:41	Julia Storbeck	2121006
	09/19/2019	09/25/2019 13:28	Sima Feizi	09/26/2019 14:43	Julia Storbeck	2121007
	09/19/2019	09/25/2019 13:28	Sima Feizi	09/26/2019 14:44	Julia Storbeck	2121011
EPA 353.2 Rev. 2.0	09/19/2019			09/25/2019 09:51	Beverly Y. Sanders	2121006
	09/19/2019			09/25/2019 09:52	Beverly Y. Sanders	2121007
	09/19/2019			09/25/2019 09:54	Beverly Y. Sanders	2121011
EPA 365.1 Rev. 2.0	09/19/2019	09/23/2019 14:45	Lipi Saha	09/24/2019 13:14	Lipi Saha	2121011
	09/19/2019	09/30/2019 14:39	Vijayalakshmi Reddy	10/01/2019 10:11	Lipi Saha	2121006
	09/19/2019	09/30/2019 14:39	Vijayalakshmi Reddy	10/02/2019 13:39	Lipi Saha	2121007
EPA 365.1 Rev. 2.0 dissolved	09/19/2019			09/19/2019 16:20	Jhamieka S. Greenwood	2121012
	09/19/2019			09/19/2019 16:22	Jhamieka S. Greenwood	2121008
	09/19/2019			09/19/2019 16:23	Jhamieka S. Greenwood	2121009
EPA 8270E	09/19/2019	09/24/2019 09:00	Fe-Val Siddell	09/25/2019 20:54	Vandana T. Nagar	2121032
	09/19/2019	09/24/2019 09:00	Fe-Val Siddell	09/25/2019 21:19	Vandana T. Nagar	2121033
	09/19/2019	09/24/2019 09:00	Fe-Val Siddell	09/25/2019 21:45	Vandana T. Nagar	2121034
EPA 8321B	09/19/2019	09/19/2019 12:00	Hoor Shaik	09/20/2019 09:00	Juyoung Kim	2121020
	09/19/2019	09/19/2019 12:00	Hoor Shaik	09/20/2019 09:35	Juyoung Kim	2121021
	09/19/2019	09/19/2019 12:00	Hoor Shaik	09/20/2019 10:09	Juyoung Kim	2121022
	09/19/2019	09/23/2019 10:00	Rebecca Ware	09/23/2019 10:49	Rebecca Ware	2121020
	09/19/2019	09/23/2019 10:00	Rebecca Ware	09/23/2019 10:59	Rebecca Ware	2121021
	09/19/2019	09/23/2019 10:00	Rebecca Ware	09/23/2019 11:10	Rebecca Ware	2121022

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	09/19/2019	09/23/2019 10:00	Rebecca Ware	09/24/2019 17:33	Rebecca Ware	2121020
	09/19/2019	09/23/2019 10:00	Rebecca Ware	09/24/2019 17:47	Rebecca Ware	2121021
	09/19/2019	09/23/2019 10:00	Rebecca Ware	09/24/2019 18:01	Rebecca Ware	2121022
	09/19/2019	09/23/2019 10:00	Rebecca Ware	09/27/2019 17:40	Rebecca Ware	2121020
	09/19/2019	09/23/2019 10:00	Rebecca Ware	09/27/2019 17:51	Rebecca Ware	2121021
	09/19/2019	09/23/2019 10:00	Rebecca Ware	09/27/2019 18:03	Rebecca Ware	2121022
SM 2120 B	09/19/2019			09/19/2019 16:40	Madeline Funaro	2121004
	09/19/2019			09/19/2019 16:41	Madeline Funaro	2121005, 2121010
SM 2320 B-97	09/19/2019			09/28/2019 03:04	Dale L. Simmons	2121004
	09/19/2019			09/28/2019 03:16	Dale L. Simmons	2121005
	09/19/2019			09/28/2019 03:31	Dale L. Simmons	2121010
SM 2540 C-97	09/19/2019			09/20/2019 17:00	Blanca Fach	2121004, 2121005, 2121010
SM 2540 D-97	09/19/2019			09/20/2019 17:00	Blanca Fach	2121004, 2121005, 2121010
SM 4500 F-C-97	09/19/2019			09/28/2019 03:04	Dale L. Simmons	2121004
	09/19/2019			09/28/2019 03:16	Dale L. Simmons	2121005
	09/19/2019			09/28/2019 03:31	Dale L. Simmons	2121010
SM 5310 B-00	09/19/2019			09/23/2019 09:29	Madeline Funaro	2121006
	09/19/2019			09/23/2019 09:44	Madeline Funaro	2121007
	09/19/2019			09/23/2019 09:58	Madeline Funaro	2121011