Chemical Analysis Report

SW-DIST-2019-09-20-01

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

Event Description: **Rice, Simms, Drainage to Mckay, Wolf Br**
Request ID: **RQ-2019-09-16-11**
Customer: **SW-DIST**
Project ID: **SMP**

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

For additional information please contact
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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator Date Certified: 09-OCT-2019 11:27

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: 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: BIGGEST FLOWING DITCH @ 45th **Collection Date/Time: 09/19/2019 09:45**

Field ID: G1SW0093 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2121387	EPA 180.1 Rev. 2.0	Turbidity	14		NTU	P371074	
	EPA 300.0	Bromide	0.081		mg Br/L	P371215	
	SM 2320 B-97	Total Alkalinity	111	Y	mg CaCO3/L	P371527	
	SM 2540 D-97	TSS	18	AY	mg/L	P371586	
	SM 4500 F-C-97	Fluoride	0.19		mg F/L	P371531	
2121391	EPA 350.1 Rev. 2.0	Ammonia-N	0.22		mg N/L	P371597	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P371212	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.22		mg N/L	P371295	
	EPA 365.1 Rev. 2.0	Total-P	0.31		mg P/L	P371314	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P371257	
2121395	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.17		mg P/L	P371085	
2121416	EPA 8321B	Acesulfame K**	0.38	I	ug/L	P371101	
		2,4-D	0.78		ug/L	P370935	MS
		AMPA**	0.33	I	ug/L	P371101	
		Sucralose**	0.43		ug/L	P371101	
		Acetaminophen**	0.019	I	ug/L	P370935	
		Acetamiprid**	0.0020	U	ug/L	P370935	
		Endothall**	0.25	U	ug/L	P371101	
		Glufosinate**	0.10	U	ug/L	P371101	
		Glyphosate**	2.0		ug/L	P371101	
		Afidopyropen**	0.0020	UJ	ug/L	P370935	
		Bentazon	0.025		ug/L	P370935	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P370935	
		Carbamazepine**	0.0039		ug/L	P370935	
		Clothianidin**	0.0020	U	ug/L	P370935	
		Dinotefuran**	0.0020	U	ug/L	P370935	
		Diuron	0.0083		ug/L	P370935	
		Fenuron	0.016	U	ug/L	P370935	
		Fluridone**	8.0E-04	U	ug/L	P370935	
		Imazapyr**	0.055		ug/L	P370935	
		Hydrocodone**	0.0020	U	ug/L	P370935	
		Ibuprofen**	0.020	U	ug/L	P370935	
		Imidacloprid	0.078		ug/L	P370935	MS
		Linuron	0.0040	U	ug/L	P370935	
		Mandestrobin**	0.0020	UJ	ug/L	P370935	
		MCPP	0.40		ug/L	P370935	MS
		Naproxen**	0.0080	U	ug/L	P370935	
		Primidone**	0.0040	U	ug/L	P370935	
		Pyraclostrobin**	0.0020	U	ug/L	P370935	
		Thiamethoxam**	0.0020	U	ug/L	P370935	
		Tolfenpyrad**	0.0020	U	ug/L	P370935	
		Triclopyr**	0.0040	U	ug/L	P370935	

Field ID: G1SW0093 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes

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: Sample was left out at room temperature overnight, should be stored below 6 degC.
EPA 8321B: J - second source check standards for some analytes were not available for analysis.

Sample Location: SIMS BRANCH @ PORT REDWING **Collection Date/Time: 09/19/2019 10:25**

Field ID: G1SW0056 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2121388	EPA 180.1 Rev. 2.0	Turbidity	3.1		NTU	P371074	
	EPA 300.0	Bromide	38		mg Br/L	P371215	
	SM 2320 B-97	Total Alkalinity	118	Y	mg CaCO3/L	P371515	
	SM 2540 D-97	TSS	9	I Y	mg/L	P371700	
	SM 4500 F-C-97	Fluoride	0.92		mg F/L	P371519	
2121392	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P371596	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.57		mg N/L	P371444	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.087		mg N/L	P371221	
	EPA 365.1 Rev. 2.0	Total-P	0.24		mg P/L	P371312	
	SM 5310 B-00	Organic Carbon	6.2		mg C/L	P371200	
2121396	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.17		mg P/L	P371083	

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. Sample was left out at room temperature overnight, should be stored below 6 degC.

Sample Location: SANDBAG DITCH @ 45th **Collection Date/Time: 09/19/2019 09:54**

Field ID: G1SW0094 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2121389	EPA 180.1 Rev. 2.0	Turbidity	36		NTU	P371074	
	EPA 300.0	Bromide	11		mg Br/L	P371215	
	SM 2320 B-97	Total Alkalinity	162	AY	mg CaCO3/L	P371515	
	SM 2540 D-97	TSS	7	I Y	mg/L	P371700	
	SM 4500 F-C-97	Fluoride	0.43		mg F/L	P371880	
2121393	EPA 350.1 Rev. 2.0	Ammonia-N	0.34		mg N/L	P371596	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.6		mg N/L	P371444	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P371221	
	EPA 365.1 Rev. 2.0	Total-P	0.67		mg P/L	P371312	
	SM 5310 B-00	Organic Carbon	23		mg C/L	P371200	
2121397	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.47		mg P/L	P371083	
2121417	EPA 8321B	Acesulfame K**	0.17	I	ug/L	P371101	
		2,4-D	0.0087		ug/L	P370935	MS
		AMPA**	0.10	U	ug/L	P371101	
		Sucralose**	0.57		ug/L	P371101	
		Acetaminophen**	0.0080	U	ug/L	P370935	
		Acetamiprid**	0.0020	U	ug/L	P370935	
		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	P370935	
		Bentazon	0.0018	I	ug/L	P370935	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P370935	
		Carbamazepine**	8.0E-04	U	ug/L	P370935	
		Clothianidin**	0.0020	U	ug/L	P370935	
		Dinotefuran**	0.0020	U	ug/L	P370935	
		Diuron	0.0073	I	ug/L	P370935	
		Fenuron	0.016	U	ug/L	P370935	
		Fluridone**	0.0013	I	ug/L	P370935	
		Imazapyr**	0.015	I	ug/L	P370935	
		Hydrocodone**	0.0020	U	ug/L	P370935	
		Ibuprofen**	0.020	U	ug/L	P370935	
		Imidacloprid	0.0028	I	ug/L	P370935	MS
		Linuron	0.0040	U	ug/L	P370935	
		Mandestrobin**	0.0020	UJ	ug/L	P370935	
		MCPP	0.0020	U	ug/L	P370935	MS
		Naproxen**	0.0080	U	ug/L	P370935	
		Primidone**	0.0066	I	ug/L	P370935	
		Pyraclostrobin**	0.0020	U	ug/L	P370935	
		Thiamethoxam**	0.0020	U	ug/L	P370935	
		Tolfenpyrad**	0.0020	U	ug/L	P370935	
		Triclopyr**	0.0040	U	ug/L	P370935	

Field ID: G1SW0094 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes

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. Sample was left out at room temperature overnight, should be stored below 6 degC.
EPA 8321B: MDL for some parameters elevated due to matrix interference.
EPA 8321B: J - second source check standards for some analytes were not available for analysis.

Sample Location: RICE CREEK @ OAK FOREST DR **Collection Date/Time: 09/19/2019 11:35**

Field ID: G2SW0096 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2121419	EPA 8321B	2,4-D	0.046		ug/L	P371132	
		Acesulfame K**	0.24	I	ug/L	P371101	
		AMPA**	0.24	I	ug/L	P371101	
		Sucralose**	0.64		ug/L	P371101	
		Acetaminophen**	0.0080	U	ug/L	P371132	
		Acetamiprid**	0.0020	U	ug/L	P371132	
		Endothall**	0.25	U	ug/L	P371101	
		Glufosinate**	0.10	U	ug/L	P371101	
		Glyphosate**	0.16	I	ug/L	P371101	
		Afidopyropen**	0.0020	UJ	ug/L	P371132	
		Bentazon	0.24		ug/L	P371132	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P371132	
		Carbamazepine**	0.0027	I	ug/L	P371132	
		Clothianidin**	0.0027	I	ug/L	P371132	
		Dinotefuran**	0.0020	U	ug/L	P371132	
		Diuron	0.015		ug/L	P371132	
		Fenuron	0.037	I	ug/L	P371132	
		Fluridone**	0.028		ug/L	P371132	
		Imazapyr**	0.27		ug/L	P371132	
		Hydrocodone**	0.0020	U	ug/L	P371132	
		Ibuprofen**	0.020	U	ug/L	P371132	
		Imidacloprid	0.028	J	ug/L	P371132	MS
		Linuron	0.0040	U	ug/L	P371132	
		Mandestrobin**	0.0020	UJ	ug/L	P371132	
		MCPP	0.0022	I J	ug/L	P371132	MS
		Naproxen**	0.0080	U	ug/L	P371132	
		Primidone**	0.010	I	ug/L	P371132	
		Pyraclostrobin**	0.0020	U	ug/L	P371132	
		Thiamethoxam**	0.0020	U	ug/L	P371132	
		Tolfenpyrad**	0.0020	U	ug/L	P371132	
		Triclopyr**	0.0040	U	ug/L	P371132	

Ref. Method and Comment:
EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for fluridone and imazapyr could not be assessed due to high concentration of parameter in the spiked sample. MS accuracy and precision for bentazon could not be assessed due to high concentration of parameter in the spiked sample. Refer to the narrative for an explanation of QC Codes.

Sample Location: WOLF BRANCH CANAL @ MANNS HARBOR DRIVE BOAT RAMP **Collection Date/Time: 09/19/2019 10:55**

Field ID: G1SW0092 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2121390	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P371074	
	EPA 300.0	Bromide	30		mg Br/L	P371215	
	SM 2320 B-97	Total Alkalinity	107	Y	mg CaCO3/L	P371515	
	SM 2540 D-97	TSS	3	I AY	mg/L	P371700	
	SM 4500 F-C-97	Fluoride	0.75		mg F/L	P371519	
2121394	EPA 350.1 Rev. 2.0	Ammonia-N	0.15		mg N/L	P371596	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.76		mg N/L	P371444	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.047		mg N/L	P371221	
	EPA 365.1 Rev. 2.0	Total-P	0.29		mg P/L	P371312	
	SM 5310 B-00	Organic Carbon	8.4		mg C/L	P371200	
2121398	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.28		mg P/L	P371083	
2121418	EPA 8321B	Acesulfame K**	0.10	U	ug/L	P371101	
		2,4-D	0.044		ug/L	P370935	MS
		AMPA**	1.0	U	ug/L	P371101	
		Sucralose**	0.99		ug/L	P371101	
		Acetaminophen**	0.0080	U	ug/L	P370935	
		Acetamiprid**	0.0020	U	ug/L	P370935	
		Endothall**	0.25	U	ug/L	P371101	
		Glufosinate**	1.0	U	ug/L	P371101	
		Glyphosate**	1.0	U	ug/L	P371101	
		Afidopyropen**	0.0020	UJ	ug/L	P370935	
		Bentazon	0.065		ug/L	P370935	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P370935	
		Carbamazepine**	0.0011	I	ug/L	P370935	
		Clothianidin**	0.0034	I	ug/L	P370935	
		Dinotefuran**	0.0033	I	ug/L	P370935	
		Diuron	0.0062	I	ug/L	P370935	
		Fenuron	0.016	U	ug/L	P370935	
		Fluridone**	0.036		ug/L	P370935	
		Imazapyr**	0.037		ug/L	P370935	
		Hydrocodone**	0.0020	U	ug/L	P370935	
		Ibuprofen**	0.020	U	ug/L	P370935	
		Imidacloprid	0.11		ug/L	P370935	MS
		Linuron	0.0040	U	ug/L	P370935	
		Mandestrobin**	0.0020	UJ	ug/L	P370935	
		MCPP	0.0066	I	ug/L	P370935	MS
		Naproxen**	0.0080	U	ug/L	P370935	
		Primidone**	0.0040	U	ug/L	P370935	
		Pyraclostrobin**	0.0020	U	ug/L	P370935	
		Thiamethoxam**	0.0020	U	ug/L	P370935	
		Tolfenpyrad**	0.0020	U	ug/L	P370935	
		Triclopyr**	0.0040	U	ug/L	P370935	

Field ID: G1SW0092 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes

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. Sample was left out at room temperature overnight, should be stored below 6 degC.
EPA 8321B: MDL for some parameters elevated due to matrix interference.
EPA 8321B: J - second source check standards for some analytes were not available for analysis.

Non-Conformance Report

NCR ID: 7939

Event(s)	Job(s)	Sample(s)	Test(s)
SW-DIST-2019-09-20-01	TLH-2019-09-20-22	2121387	
SW-DIST-2019-09-20-01	TLH-2019-09-20-22	2121388	
SW-DIST-2019-09-20-01	TLH-2019-09-20-22	2121389	
SW-DIST-2019-09-20-01	TLH-2019-09-20-22	2121390	

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: Peter D. Kaus 10/7/2019

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: P371074

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0
Batch ID: P371215

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371596

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371597

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371212

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371444

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371221

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371295

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371312

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371314

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371083

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371085

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

Reference Method: EPA 8321B
Batch ID: P370935

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
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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P371101

Component	Result	Code	Units
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P371132

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
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: SM 2320 B-97
Batch ID: P371515

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

Reference Method: SM 2320 B-97
Batch ID: P371527

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

Reference Method: SM 2540 D-97
Batch ID: P371586

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P371700

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P371519

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P371531

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P371880

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P371200

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

Reference Method: SM 5310 B-00
Batch ID: P371257

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 300.0
Batch ID: P371215

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bromide	97.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371596

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371597

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.3		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371212

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.9		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371444

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371221

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371295

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: P371312

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371314

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	96.5		P	90 - 110

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371083

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371085

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

Reference Method: EPA 8321B
Batch ID: P370935

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	151		P	40 - 160
Acetaminophen	86.2		P	30 - 160
Acetamiprid	107		P	40 - 160
Afidopyropen	105		P	40 - 160
Bentazon	121		P	30 - 160
Benzovindiflupyr	97.5		P	40 - 160
Carbamazepine	108		P	40 - 160
Clothianidin	95.3		P	40 - 160
Dinotefuran	97.8		P	40 - 160
Diuron	105		P	40 - 160
Fenuron	105		P	40 - 160
Fluridone	99.2		P	40 - 160
Hydrocodone	93.1		P	40 - 160
Ibuprofen	100		P	30 - 160
Imazapyr	99.4		P	40 - 160
Imidacloprid	108		P	40 - 160
Linuron	84.2		P	40 - 160
Mandestrobin	96.7		P	40 - 160
MCPP	159		P	40 - 160
Naproxen	83.0		P	40 - 160
Primidone	94.3		P	40 - 160
Pyraclostrobin	90.5		P	30 - 160
Thiamethoxam	92.7		P	40 - 160
Tolfenpyrad	69.5		P	40 - 160
Triclopyr	120		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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P371132

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	131		P	40 - 160
Acetaminophen	87.5		P	30 - 160
Acetamiprid	95.9		P	40 - 160
Afidopyropen	103		P	40 - 160
Bentazon	99.0		P	30 - 160
Benzovindiflupyr	89.4		P	40 - 160
Carbamazepine	119		P	40 - 160
Clothianidin	90.4		P	40 - 160
Dinotefuran	93.3		P	40 - 160
Diuron	91.3		P	40 - 160
Fenuron	101		P	40 - 160
Fluridone	107		P	40 - 160
Hydrocodone	96.4		P	40 - 160
Ibuprofen	84.8		P	30 - 160
Imazapyr	94.3		P	40 - 160
Imidacloprid	116		P	40 - 160
Linuron	76.1		P	40 - 160
Mandestrobin	93.0		P	40 - 160
MCPP	148		P	40 - 160
Naproxen	83.5		P	40 - 160
Primidone	87.3		P	40 - 160
Pyraclostrobin	84.8		P	30 - 160
Thiamethoxam	103		P	40 - 160
Tolfenpyrad	61.7		P	40 - 160
Triclopyr	116		P	30 - 160

Reference Method: SM 2320 B-97
Batch ID: P371515

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

Reference Method: SM 2320 B-97
Batch ID: P371527

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P371519

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.1		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P371531

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.4		P	92 - 103

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P371880

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.5		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P371200

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

Reference Method: SM 5310 B-00
Batch ID: P371257

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

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0
Batch ID: P371215

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2121387	Bromide	96.0	95.9	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371596

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2121089	Ammonia-N	97.7	96.3	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371597

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2121455	Ammonia-N	96.1	96.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371212

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2121427	Kjeldahl Nitrogen	102	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371444

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2121246	Kjeldahl Nitrogen	101	99.7	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371221

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2121392	NO2NO3-N	104	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371295

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2121391	NO2NO3-N	97.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371312

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2121392	Total-P	95.4	91.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371314

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2121335	Total-P	101	94.8	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371083

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2121252	O-Phosphate-P	96.7	97.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371085

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2121456	O-Phosphate-P	98.2	99.5	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P370935

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2121150	2,4-D	169	163	F/F	40 - 160
2121150	Acetaminophen	74.3	74.7	P/P	30 - 160
2121150	Acetamiprid	127	118	P/P	40 - 160
2121150	Afidopyropen	117	108	P/P	40 - 160
2121150	Bentazon	69.4	64.1	P/P	30 - 160
2121150	Benzovindiflupyr	100	101	P/P	40 - 160
2121150	Carbamazepine	95.0	90.8	P/P	40 - 160
2121150	Clothianidin	88.4	107	P/P	40 - 160
2121150	Dinotefuran	119	111	P/P	40 - 160
2121150	Diuron	90.4	87.8	P/P	40 - 160
2121150	Fenuron	94.8	91.2	P/P	40 - 160
2121150	Fluridone	93.2	93.1	P/P	40 - 160
2121150	Hydrocodone	108	102	P/P	40 - 160
2121150	Ibuprofen	95.7	93.5	P/P	30 - 160
2121150	Imazapyr	119	108	P/P	40 - 160
2121150	Imidacloprid	187	190	F/F	40 - 160
2121150	Linuron	73.9	75.6	P/P	40 - 160
2121150	Mandestrobin	95.0	92.4	P/P	40 - 160
2121150	MCPP	169	171	F/F	40 - 160
2121150	Naproxen	102	105	P/P	40 - 160
2121150	Primidone	99.6	92.5	P/P	40 - 160
2121150	Pyraclostrobin	97.9	97.1	P/P	30 - 160
2121150	Thiamethoxam	130	140	P/P	40 - 160
2121150	Tolfenpyrad	71.9	71.4	P/P	40 - 160
2121150	Triclopyr	143	140	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

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P371132

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2121419	2,4-D	132	124	P/P	40 - 160
2121419	Acetaminophen	71.9	75.5	P/P	30 - 160
2121419	Acetamiprid	110	112	P/P	40 - 160
2121419	Afidopyropen	85.6	112	P/P	40 - 160
2121419	Benzovindiflupyr	99.9	98.9	P/P	40 - 160
2121419	Carbamazepine	104	105	P/P	40 - 160
2121419	Clothianidin	98.5	86.7	P/P	40 - 160
2121419	Dinotefuran	111	111	P/P	40 - 160
2121419	Diuron	83.5	82.0	P/P	40 - 160
2121419	Fenuron	83.4	84.5	P/P	40 - 160
2121419	Hydrocodone	93.2	97.4	P/P	40 - 160
2121419	Ibuprofen	89.8	90.7	P/P	30 - 160
2121419	Imidacloprid	182	192	F/F	40 - 160
2121419	Linuron	75.7	76.7	P/P	40 - 160
2121419	Mandestrobin	96.4	98.6	P/P	40 - 160
2121419	MCPP	162	168	F/F	40 - 160
2121419	Naproxen	90.4	102	P/P	40 - 160
2121419	Primidone	97.0	99.9	P/P	40 - 160
2121419	Pyraclostrobin	92.1	91.6	P/P	30 - 160
2121419	Thiamethoxam	142	143	P/P	40 - 160
2121419	Tolfenpyrad	71.0	76.6	P/P	40 - 160
2121419	Triclopyr	105	131	P/P	30 - 160

Reference Method: SM 4500 F-C-97
Batch ID: P371519

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2119124	Fluoride	95.1	95.1	P/P	89 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P371531

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2121189	Fluoride	97.1	96.5	P/P	89 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P371880

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122535	Fluoride	96.9	96.9	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P371200

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2121392	Organic Carbon	97.0	99.3	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P371257

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2121199	Organic Carbon	96.8	97.6	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P371074

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121287	Turbidity	5.92	Sample	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P371215

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121387	Bromide	0.0178	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371596

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121089	Ammonia-N	1.28	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371597

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121455	Ammonia-N	0.107	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371212

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121427	Kjeldahl Nitrogen	1.12	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371444

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121246	Kjeldahl Nitrogen	0.654	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371221

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121392	NO2NO3-N	0.682	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371295

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121391	NO2NO3-N	0.724	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371312

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121392	Total-P	2.91	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371314

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121335	Total-P	6.39	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371083

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121252	O-Phosphate-P	0.322	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371085

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121456	O-Phosphate-P	1.32	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P370935

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121150	2,4-D	3.53	Spike	P	0 - 30
2121150	Acetaminophen	0.573	Spike	P	0 - 30
2121150	Acetamiprid	7.35	Spike	P	0 - 30
2121150	Afidopyropen	7.71	Spike	P	0 - 30
2121150	Bentazon	7.96	Spike	P	0 - 30
2121150	Benzovindiflupyr	0.744	Spike	P	0 - 30
2121150	Carbamazepine	4.47	Spike	P	0 - 30
2121150	Clothianidin	18.7	Spike	P	0 - 30
2121150	Dinotefuran	6.97	Spike	P	0 - 30
2121150	Diuron	2.89	Spike	P	0 - 30
2121150	Fenuron	3.91	Spike	P	0 - 30
2121150	Fluridone	0.139	Spike	P	0 - 30
2121150	Hydrocodone	5.86	Spike	P	0 - 30
2121150	Ibuprofen	2.30	Spike	P	0 - 30
2121150	Imazapyr	9.87	Spike	P	0 - 30
2121150	Imidacloprid	1.79	Spike	P	0 - 30
2121150	Linuron	2.30	Spike	P	0 - 30
2121150	Mandestrobin	2.86	Spike	P	0 - 30
2121150	MCPP	1.53	Spike	P	0 - 30
2121150	Naproxen	3.70	Spike	P	0 - 30
2121150	Primidone	7.34	Spike	P	0 - 30
2121150	Pyraclostrobin	0.820	Spike	P	0 - 30
2121150	Thiamethoxam	7.67	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P370935

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121150	Tolfenpyrad	0.686	Spike	P	0 - 30
2121150	Triclopyr	1.80	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: EPA 8321B
Batch ID: P371132

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121419	2,4-D	4.44	Spike	P	0 - 30
2121419	Acetaminophen	4.87	Spike	P	0 - 30
2121419	Acetamiprid	1.41	Spike	P	0 - 30
2121419	Afidopyropen	26.8	Spike	P	0 - 30
2121419	Benzovindiflupyr	1.02	Spike	P	0 - 30
2121419	Carbamazepine	0.853	Spike	P	0 - 30
2121419	Clothianidin	12.3	Spike	P	0 - 30
2121419	Dinotefuran	0.235	Spike	P	0 - 30
2121419	Diuron	1.55	Spike	P	0 - 30
2121419	Fenuron	0.877	Spike	P	0 - 30
2121419	Fluridone	1.16	Spike	P	0 - 30
2121419	Hydrocodone	4.45	Spike	P	0 - 30
2121419	Ibuprofen	0.934	Spike	P	0 - 30
2121419	Imazapyr	7.44	Spike	P	0 - 30
2121419	Imidacloprid	4.37	Spike	P	0 - 30
2121419	Linuron	1.27	Spike	P	0 - 30
2121419	Mandestrobin	2.24	Spike	P	0 - 30
2121419	MCPP	3.72	Spike	P	0 - 30
2121419	Naproxen	12.5	Spike	P	0 - 30
2121419	Primidone	2.63	Spike	P	0 - 30
2121419	Pyraclostrobin	0.502	Spike	P	0 - 30
2121419	Thiamethoxam	0.693	Spike	P	0 - 30
2121419	Tolfenpyrad	7.61	Spike	P	0 - 30
2121419	Triclopyr	22.6	Spike	P	0 - 30

Reference Method: SM 2320 B-97
Batch ID: P371515

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121389	Total Alkalinity	0.179	Sample	P	0 - 2.8

Quality Assurance Report
Precision

Reference Method: SM 2320 B-97
Batch ID: P371527

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121189	Total Alkalinity	0.487	Sample	P	0 - 2.8

Reference Method: SM 2540 D-97
Batch ID: P371586

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121387	TSS	4.35	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P371519

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2119124	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-97
Batch ID: P371531

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121189	Fluoride	0.487	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-97
Batch ID: P371880

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122535	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P371200

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121392	Organic Carbon	2.02	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P371257

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121199	Organic Carbon	0.926	Spike	P	0 - 20

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2121416
Field Sample ID: G1SW0093

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	146	P	30 - 160
EPA 8321B	Acetaminophen-d4	45.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	70.3	P	30 - 160
EPA 8321B	Diuron-d6	64.7	P	30 - 160
EPA 8321B	Endothall-d6	95.0	P	30 - 160
EPA 8321B	Endothall-d6	95.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	87.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	87.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	65.7	P	30 - 160
EPA 8321B	Primidone-d5	85.8	P	30 - 160
EPA 8321B	Sucralose-d6	156	P	30 - 160
EPA 8321B	Sucralose-d6	156	P	30 - 160

Lab Sample ID: 2121417
Field Sample ID: G1SW0094

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	151	P	30 - 160
EPA 8321B	Acetaminophen-d4	64.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	79.6	P	30 - 160
EPA 8321B	Diuron-d6	73.6	P	30 - 160
EPA 8321B	Endothall-d6	79.2	P	30 - 160
EPA 8321B	Endothall-d6	79.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	55.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	55.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	82.9	P	30 - 160
EPA 8321B	Primidone-d5	93.9	P	30 - 160
EPA 8321B	Sucralose-d6	149	P	30 - 160
EPA 8321B	Sucralose-d6	149	P	30 - 160

Lab Sample ID: 2121418
Field Sample ID: G1SW0092

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	146	P	30 - 160
EPA 8321B	Acetaminophen-d4	72.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	93.6	P	30 - 160
EPA 8321B	Diuron-d6	87.5	P	30 - 160
EPA 8321B	Endothall-d6	82.2	P	30 - 160
EPA 8321B	Endothall-d6	82.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	58.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	58.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	71.7	P	30 - 160
EPA 8321B	Primidone-d5	102	P	30 - 160
EPA 8321B	Sucralose-d6	154	P	30 - 160
EPA 8321B	Sucralose-d6	154	P	30 - 160

Lab Sample ID: 2121419
Field Sample ID: G2SW0096

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	129	P	30 - 160

Quality Assurance Report
Surrogates

Lab Sample ID: 2121419
Field Sample ID: G2SW0096

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	66.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	98.7	P	30 - 160
EPA 8321B	Diuron-d6	84.8	P	30 - 160
EPA 8321B	Endothall-d6	160	P	30 - 160
EPA 8321B	Endothall-d6	160	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	86.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	86.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	89.2	P	30 - 160
EPA 8321B	Primidone-d5	93.5	P	30 - 160
EPA 8321B	Sucralose-d6	91.9	P	30 - 160
EPA 8321B	Sucralose-d6	91.9	P	30 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A94382
Included Lab Sample IDs: 2121387, 2121388, 2121389, 2121390

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A94385
Included Lab Sample IDs: 2121395, 2121396, 2121397, 2121398

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.0	98.6	P/P	90 - 110
O-Phosphate-P	98.6	99.0	P/P	90 - 110
O-Phosphate-P	99.0	97.6	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A94410
Included Lab Sample IDs: 2121416, 2121417, 2121418

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	137	112	P/P	50 - 150
Acetaminophen	103	110	P/P	60 - 160
Acetamiprid	116	112	P/P	50 - 150
Afidopyropen	83.0	102	P/P	50 - 150
Bentazon	113	110	P/P	50 - 160
Benzovindiflupyr	106	97.6	P/P	50 - 150
Carbamazepine	105	105	P/P	60 - 150
Clothianidin	101	109	P/P	60 - 150
Dinotefuran	104	104	P/P	50 - 150
Diuron	109	109	P/P	60 - 150
Fenuron	109	114	P/P	60 - 150
Fluridone	111	106	P/P	60 - 160
Hydrocodone	114	115	P/P	60 - 150
Ibuprofen	78.9	89.8	P/P	50 - 160
Imazapyr	101	104	P/P	50 - 150
Imidacloprid	102	95.0	P/P	60 - 150
Linuron	91.0	95.3	P/P	60 - 150
Mandestrobin	114	105	P/P	50 - 150
MCPP	91.9	95.1	P/P	50 - 150
Naproxen	77.2	78.6	P/P	50 - 160
Primidone	108	99.5	P/P	60 - 150
Pyraclostrobin	121	110	P/P	60 - 150
Thiamethoxam	80.3	104	P/P	50 - 150
Tolfenpyrad	127	113	P/P	60 - 150
Triclopyr	108	90.4	P/P	50 - 150

Reference Method: SM 5310 B-00
Run ID: A94437
Included Lab Sample IDs: 2121392, 2121393, 2121394

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	93.1	98.2	P/P	90 - 110
Organic Carbon	98.2	99.6	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 300.0
Run ID: A94448
Included Lab Sample IDs: 2121387, 2121388, 2121389, 2121390

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A94451
Included Lab Sample IDs: 2121392, 2121393, 2121394

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

Reference Method: EPA 8321B
Run ID: A94467
Included Lab Sample IDs: 2121416, 2121417, 2121418, 2121419

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	97.1	121	P/P	60 - 160
Endothall	93.2	93.6	P/P	60 - 160

Reference Method: SM 5310 B-00
Run ID: A94471
Included Lab Sample IDs: 2121391

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.1	97.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A94489
Included Lab Sample IDs: 2121391

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A94517
Included Lab Sample IDs: 2121391, 2121392, 2121393, 2121394

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.6	99.9	P/P	90 - 110
Total-P	98.3	98.7	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A94522
Included Lab Sample IDs: 2121416, 2121417, 2121418, 2121419

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	101	103	P/P	60 - 160
AMPA	69.2	99.4	P/P	60 - 160
AMPA	99.4	101	P/P	60 - 160
Glufosinate	111	93.2	P/P	60 - 160
Glufosinate	75.0	86.5	P/P	60 - 160
Glufosinate	86.5	111	P/P	60 - 160
Glyphosate	102	104	P/P	60 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A94522
Included Lab Sample IDs: 2121416, 2121417, 2121418, 2121419

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	104	121	P/P	60 - 160
Glyphosate	62.0	102	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A94534
Included Lab Sample IDs: 2121419

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	104	97.9	P/P	50 - 150
Acetaminophen	110	105	P/P	60 - 160
Acetamiprid	107	113	P/P	50 - 150
Afidopyropen	101	93.3	P/P	50 - 150
Bentazon	103	103	P/P	50 - 160
Benzovindiflupyr	109	109	P/P	50 - 150
Carbamazepine	121	122	P/P	60 - 150
Clothianidin	112	94.4	P/P	60 - 150
Dinotefuran	107	96.8	P/P	50 - 150
Diuron	104	105	P/P	60 - 150
Fenuron	110	108	P/P	60 - 150
Fluridone	108	111	P/P	60 - 160
Hydrocodone	108	109	P/P	60 - 150
Ibuprofen	97.4	98.2	P/P	50 - 160
Imazapyr	109	94.6	P/P	50 - 150
Imidacloprid	103	95.4	P/P	60 - 150
Linuron	102	108	P/P	60 - 150
Mandestrobin	117	117	P/P	50 - 150
MCPP	102	99.2	P/P	50 - 150
Naproxen	130	109	P/P	50 - 160
Primidone	101	95.7	P/P	60 - 150
Pyraclostrobin	110	108	P/P	60 - 150
Thiamethoxam	106	102	P/P	50 - 150
Tolfenpyrad	111	112	P/P	60 - 150
Triclopyr	105	92.2	P/P	50 - 150

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A94536
Included Lab Sample IDs: 2121391

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

Reference Method: SM 2320 B-97
Run ID: A94575
Included Lab Sample IDs: 2121388, 2121389, 2121390

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

Quality Assurance Report
Calibration Verification

Reference Method: SM 4500 F-C-97
Run ID: A94575
Included Lab Sample IDs: 2121388, 2121390

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

Reference Method: SM 2320 B-97
Run ID: A94582
Included Lab Sample IDs: 2121387

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

Reference Method: SM 4500 F-C-97
Run ID: A94582
Included Lab Sample IDs: 2121387

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

Reference Method: EPA 8321B
Run ID: A94586
Included Lab Sample IDs: 2121416, 2121417, 2121418, 2121419

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	99.8	103	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A94597
Included Lab Sample IDs: 2121392, 2121393, 2121394

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	107	P/P	90 - 110
Kjeldahl Nitrogen	103	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A94610
Included Lab Sample IDs: 2121391, 2121392, 2121393, 2121394

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.0	97.5	P/P	90 - 110
Ammonia-N	97.2	97.5	P/P	90 - 110
Ammonia-N	97.5	97.1	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A94719
Included Lab Sample IDs: 2121389

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.0	100	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					5.92	
EPA 300.0	Bromide	97.1	96.0	95.9			0.0178
EPA 350.1 Rev. 2.0	Ammonia-N	102	97.7	96.3			1.28
	Ammonia-N	95.3	96.1	96.2			0.107
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.9	102	100			1.12
	Kjeldahl Nitrogen	96.5	101	99.7			0.654
EPA 353.2 Rev. 2.0	NO2NO3-N	100	104	102			0.682
	NO2NO3-N	102	97.5				0.724
EPA 365.1 Rev. 2.0	Total-P	95.8	95.4	91.8			2.91
	Total-P	96.5	101	94.8			6.39
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102	96.7	97.1			0.322
	O-Phosphate-P	100	98.2	99.5			1.32
EPA 8321B	2,4-D	151	169	163			3.53
	2,4-D	131	132	124			4.44
	Acesulfame K	126	134	134			0.412
	Acetaminophen	86.2	74.3	74.7			0.573
	Acetaminophen	87.5	71.9	75.5			4.87
	Acetamiprid	107	127	118			7.35
	Acetamiprid	95.9	110	112			1.41
	Afidopyropen	105	117	108			7.71
	Afidopyropen	103	85.6	112			26.8
	AMPA	89.5	46.3	49.7			4.62
	Bentazon	121	69.4	64.1			7.96
	Bentazon	99.0					
	Benzovindiflupyr	97.5	100	101			0.744
	Benzovindiflupyr	89.4	99.9	98.9			1.02
	Carbamazepine	108	95.0	90.8			4.47
	Carbamazepine	119	104	105			0.853
	Clothianidin	95.3	88.4	107			18.7
	Clothianidin	90.4	98.5	86.7			12.3
	Dinotefuran	97.8	119	111			6.97
	Dinotefuran	93.3	111	111			0.235
	Diuron	105	90.4	87.8			2.89
	Diuron	91.3	83.5	82.0			1.55
	Endothall	83.5	81.1	82.8			2.08
	Fenuron	105	94.8	91.2			3.91
	Fenuron	101	83.4	84.5			0.877
	Fluridone	99.2	93.2	93.1			0.139
	Fluridone	107					1.16
	Glufosinate	88.1	81.2	80.4			1.02
	Glyphosate	77.0	62.9	68.9			7.20
	Hydrocodone	93.1	108	102			5.86
	Hydrocodone	96.4	93.2	97.4			4.45
	Ibuprofen	100	95.7	93.5			2.30
	Ibuprofen	84.8	89.8	90.7			0.934
	Imazapyr	99.4	119	108			9.87
	Imazapyr	94.3					7.44
	Imidacloprid	108	187	190			1.79
	Imidacloprid	116	182	192			4.37
	Linuron	84.2	73.9	75.6			2.30
	Linuron	76.1	75.7	76.7			1.27
	Mandestrobin	96.7	95.0	92.4			2.86
	Mandestrobin	93.0	96.4	98.6			2.24
	MCPP	159	169	171			1.53

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8321B	MCPP	148	162	168			3.72
	Naproxen	83.0	102	105			3.70
	Naproxen	83.5	90.4	102			12.5
	Primidone	94.3	99.6	92.5			7.34
	Primidone	87.3	97.0	99.9			2.63
	Pyraclostrobin	90.5	97.9	97.1			0.820
	Pyraclostrobin	84.8	92.1	91.6			0.502
	Sucralose	109	111	112			0.217
	Thiamethoxam	92.7	130	140			7.67
	Thiamethoxam	103	142	143			0.693
	Tolfenpyrad	69.5	71.9	71.4			0.686
	Tolfenpyrad	61.7	71.0	76.6			7.61
	Triclopyr	120	143	140			1.80
	Triclopyr	116	105	131			22.6
SM 2320 B-97	Total Alkalinity	101				0.179	
	Total Alkalinity	102				0.487	
SM 2540 D-97	TSS					4.35	
SM 4500 F-C-97	Fluoride	96.1	95.1	95.1			0.0
	Fluoride	97.4	97.1	96.5			0.487
	Fluoride	95.5	96.9	96.9			0.0
SM 5310 B-00	Organic Carbon	97.9	97.0	99.3			2.02
	Organic Carbon	94.6	96.8	97.6			0.926

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2121387, 2121388, 2121389, 2121390
EPA 300.0 / E31780	Bromide in aqueous matrices	2121387, 2121388, 2121389, 2121390
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2121391, 2121392, 2121393, 2121394
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2121391, 2121392, 2121393, 2121394
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2121391, 2121392, 2121393, 2121394
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2121391, 2121392, 2121393, 2121394
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2121395, 2121396, 2121397, 2121398
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2121416, 2121417, 2121418, 2121419
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2121416, 2121417, 2121418, 2121419
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2121387, 2121388, 2121389, 2121390
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2121387, 2121388, 2121389, 2121390
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2121387, 2121388, 2121389, 2121390
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2121391, 2121392, 2121393, 2121394

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	09/20/2019			09/20/2019 16:56	Samantha Davila	2121387, 2121388, 2121389, 2121390
EPA 300.0	09/20/2019			09/23/2019 20:56	Jhamieka S. Greenwood	2121387
	09/20/2019			09/23/2019 22:04	Jhamieka S. Greenwood	2121388
	09/20/2019			09/23/2019 22:21	Jhamieka S. Greenwood	2121389
	09/20/2019			09/23/2019 22:39	Jhamieka S. Greenwood	2121390
EPA 350.1 Rev. 2.0	09/20/2019			09/27/2019 14:33	Ping Hua	2121392
	09/20/2019			09/27/2019 14:35	Ping Hua	2121393
	09/20/2019			09/27/2019 14:42	Ping Hua	2121394
	09/20/2019			09/27/2019 15:24	Ping Hua	2121391
EPA 351.2 Rev. 2.0	09/20/2019	09/24/2019 12:39	Sima Feizi	09/25/2019 17:38	Julia Storbeck	2121391
	09/20/2019	09/27/2019 12:10	Jhamieka S. Greenwood	09/30/2019 14:32	Virginia P. Brown	2121392
	09/20/2019	09/27/2019 12:10	Jhamieka S. Greenwood	09/30/2019 14:37	Virginia P. Brown	2121393
	09/20/2019	09/27/2019 12:10	Jhamieka S. Greenwood	09/30/2019 14:39	Virginia P. Brown	2121394
EPA 353.2 Rev. 2.0	09/20/2019			09/24/2019 11:03	Beverly Y. Sanders	2121392
	09/20/2019			09/24/2019 11:09	Beverly Y. Sanders	2121393
	09/20/2019			09/24/2019 11:10	Beverly Y. Sanders	2121394
	09/20/2019			09/25/2019 11:15	Beverly Y. Sanders	2121391
EPA 365.1 Rev. 2.0	09/20/2019	09/25/2019 14:00	Lipi Saha	09/26/2019 11:01	Lipi Saha	2121392
	09/20/2019	09/25/2019 14:00	Lipi Saha	09/26/2019 11:06	Lipi Saha	2121393
	09/20/2019	09/25/2019 14:00	Lipi Saha	09/26/2019 11:07	Lipi Saha	2121394
	09/20/2019	09/25/2019 14:00	Lipi Saha	09/26/2019 11:53	Lipi Saha	2121391
EPA 365.1 Rev. 2.0 dissolved	09/20/2019			09/20/2019 17:56	Jhamieka S. Greenwood	2121396
	09/20/2019			09/20/2019 17:57	Jhamieka S. Greenwood	2121397
	09/20/2019			09/20/2019 18:05	Jhamieka S. Greenwood	2121398
	09/20/2019			09/20/2019 18:18	Jhamieka S. Greenwood	2121395
EPA 8321B	09/20/2019	09/20/2019 12:00	Hoor Shaik	09/21/2019 04:02	Juyoung Kim	2121416
	09/20/2019	09/20/2019 12:00	Hoor Shaik	09/21/2019 04:36	Juyoung Kim	2121417
	09/20/2019	09/20/2019 12:00	Hoor Shaik	09/21/2019 05:11	Juyoung Kim	2121418
	09/20/2019	09/23/2019 10:00	Rebecca Ware	09/23/2019 12:05	Rebecca Ware	2121416
	09/20/2019	09/23/2019 10:00	Rebecca Ware	09/23/2019 12:37	Rebecca Ware	2121419
	09/20/2019	09/23/2019 10:00	Rebecca Ware	09/23/2019 14:37	Rebecca Ware	2121417
	09/20/2019	09/23/2019 10:00	Rebecca Ware	09/23/2019 14:58	Rebecca Ware	2121418
	09/20/2019	09/23/2019 10:00	Rebecca Ware	09/24/2019 19:10	Rebecca Ware	2121416
	09/20/2019	09/23/2019 10:00	Rebecca Ware	09/24/2019 19:24	Rebecca Ware	2121417
	09/20/2019	09/23/2019 10:00	Rebecca Ware	09/24/2019 19:38	Rebecca Ware	2121418
	09/20/2019	09/23/2019 10:00	Rebecca Ware	09/24/2019 19:51	Rebecca Ware	2121419
	09/20/2019	09/23/2019 10:00	Rebecca Ware	09/27/2019 19:02	Rebecca Ware	2121416
	09/20/2019	09/23/2019 10:00	Rebecca Ware	09/27/2019 19:14	Rebecca Ware	2121417
	09/20/2019	09/23/2019 10:00	Rebecca Ware	09/27/2019 19:25	Rebecca Ware	2121418
	09/20/2019	09/23/2019 10:00	Rebecca Ware	09/27/2019 19:37	Rebecca Ware	2121419

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	09/20/2019	09/24/2019 13:10	Hoor Shaik	09/25/2019 02:52	Juyoung Kim	2121419
	09/20/2019	09/24/2019 13:10	Hoor Shaik	09/25/2019 16:42	Juyoung Kim	2121419
SM 2320 B-97	09/20/2019			09/27/2019 02:21	Dale L. Simmons	2121389
	09/20/2019			09/27/2019 05:11	Dale L. Simmons	2121388
	09/20/2019			09/27/2019 05:23	Dale L. Simmons	2121390
	09/20/2019			09/28/2019 09:57	Dale L. Simmons	2121387
SM 2540 D-97	09/20/2019			09/25/2019 14:25	Yijie Li	2121387, 2121388, 2121389, 2121390
SM 4500 F-C-97	09/20/2019			09/27/2019 01:53	Dale L. Simmons	2121388
	09/20/2019			09/27/2019 01:57	Dale L. Simmons	2121390
	09/20/2019			09/28/2019 09:57	Dale L. Simmons	2121387
	09/20/2019			10/01/2019 18:06	Dale L. Simmons	2121389
SM 5310 B-00	09/20/2019			09/24/2019 07:00	Madeline Funaro	2121392
	09/20/2019			09/24/2019 10:25	Madeline Funaro	2121393
	09/20/2019			09/24/2019 10:38	Madeline Funaro	2121394
	09/20/2019			09/25/2019 04:04	Madeline Funaro	2121391