Chemical Analysis Report

NE-DIST-2021-01-27-01

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

Event Description: **Pellicer Creek and Tribs**
Request ID: **RQ-2021-01-25-08**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator Date Certified: 18-FEB-2021 17:20

B. Steinbock

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: Stevens BR @ Cr 204 **Collection Date/Time: 01/26/2021 10:30**

Field ID: 27010062 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221674	EPA 8321B	2,4-D	0.0020	U	ug/L	P392967	
		Acesulfame K	0.10	U	ug/L	P393118	
		AMPA	0.10	U	ug/L	P393118	
		Sucralose	0.010	U	ug/L	P393118	
		Acetaminophen**	0.0080	U	ug/L	P392967	
		Acetamiprid**	0.0020	U	ug/L	P392967	
		Endothall	0.25	U	ug/L	P393118	
		Glufosinate	0.10	U	ug/L	P393118	
		Glyphosate	0.10	U	ug/L	P393118	
		Afidopyropen**	0.0020	U	ug/L	P392967	
		Bentazon	8.0E-04	U	ug/L	P392967	
		Benzovindiflupyr**	0.0020	U	ug/L	P392967	
		Carbamazepine**	8.0E-04	U	ug/L	P392967	
		Clothianidin**	0.0020	U	ug/L	P392967	
		Dinotefuran**	0.0020	U	ug/L	P392967	
		Diuron	0.0020	U	ug/L	P392967	
		Fenuron	0.016	U	ug/L	P392967	
		Fluridone**	8.0E-04	U	ug/L	P392967	
		Imazapyr**	0.034		ug/L	P392967	
		Hydrocodone**	0.0020	U	ug/L	P392967	
		Ibuprofen**	0.020	U	ug/L	P392967	
		Imidacloprid	0.0020	U	ug/L	P392967	
		Linuron	0.0040	U	ug/L	P392967	
		Mandestrobin**	0.0020	U	ug/L	P392967	
		MCPP	0.0020	U	ug/L	P392967	
		Naproxen**	0.0080	U	ug/L	P392967	
		Primidone**	0.0040	U	ug/L	P392967	
		Pyraclostrobin**	0.0020	U	ug/L	P392967	
		Thiamethoxam**	0.0020	U	ug/L	P392967	
		Tolfenpyrad**	0.0020	U	ug/L	P392967	
		Triclopyr**	0.0040	U	ug/L	P392967	

Sample Location: Stevens Branch S of Pelicer Cemetery Off Cr 204 **Collection Date/Time: 01/26/2021 10:45**

Field ID: 27010070 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221630	EPA 180.1 Rev. 2.0	Turbidity	4.0		NTU	P393074	
	EPA 300.0 Rev. 2.1	Chloride	25	A	mg Cl/L	P393371	
		Sulfate	26	A	mg SO4/L	P393374	
	SM 2120 B-2011	Color (true)	140		PCU	P393059	
	SM 2320 B-2011	Total Alkalinity	130		mg CaCO3/L	P393215	
	SM 2540 C-2011	TDS	264		mg/L	P393483	
	SM 2540 D-2011	TSS	3	I	mg/L	P393357	
	SM 4500 F-C-2011	Fluoride	0.22		mg F/L	P393218	
2221634	EPA 350.1 Rev. 2.0	Ammonia-N	0.023		mg N/L	P393463	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.59		mg N/L	P393261	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.021		mg N/L	P393191	
	EPA 365.1 Rev. 2.0	Total-P	0.095		mg P/L	P393320	
	SM 5310 B-2011	Organic Carbon	21		mg C/L	P393187	
2221638	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.073		mg P/L	P393113	MS
2221670	EPA 8321B	2,4-D	0.0020	U	ug/L	P392967	
		Acesulfame K	0.10	U	ug/L	P393118	
		AMPA	0.10	U	ug/L	P393118	
		Sucralose	0.016	I	ug/L	P393118	
		Acetaminophen**	0.0080	U	ug/L	P392967	
		Acetamiprid**	0.0020	U	ug/L	P392967	
		Endothall	0.25	U	ug/L	P393118	
		Glufosinate	0.10	U	ug/L	P393118	
		Glyphosate	0.10	U	ug/L	P393118	
		Afidopyropen**	0.0020	U	ug/L	P392967	
		Bentazon	8.0E-04	U	ug/L	P392967	
		Benzovindiflupyr**	0.0020	U	ug/L	P392967	
		Carbamazepine**	8.0E-04	U	ug/L	P392967	
		Clothianidin**	0.0020	U	ug/L	P392967	
		Dinotefuran**	0.0020	U	ug/L	P392967	
		Diuron	0.0020	U	ug/L	P392967	
		Fenuron	0.016	U	ug/L	P392967	
		Fluridone**	8.0E-04	U	ug/L	P392967	
		Imazapyr**	0.022		ug/L	P392967	
		Hydrocodone**	0.0020	U	ug/L	P392967	
		Ibuprofen**	0.020	U	ug/L	P392967	
		Imidacloprid	0.0020	U	ug/L	P392967	
		Linuron	0.0040	U	ug/L	P392967	
		Mandestrobin**	0.0020	U	ug/L	P392967	
		MCPP	0.0020	U	ug/L	P392967	
		Naproxen**	0.0080	U	ug/L	P392967	
		Primidone**	0.0040	U	ug/L	P392967	
		Pyraclostrobin**	0.0020	U	ug/L	P392967	

Field ID: 27010070 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221670	EPA 8321B	Thiamethoxam**	0.0020	U	ug/L	P392967	
		Tolfenpyrad**	0.0020	U	ug/L	P392967	
		Triclopyr**	0.0040	U	ug/L	P392967	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Pringle Br Unnamed Dirt Rd 0.5mi S Dave Br **Collection Date/Time: 01/26/2021 11:10**

Field ID: 27010203 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221631	EPA 180.1 Rev. 2.0	Turbidity	5.6		NTU	P393074	
	EPA 300.0 Rev. 2.1	Chloride	25		mg Cl/L	P393371	
		Sulfate	1.3		mg SO4/L	P393374	
	SM 2120 B-2011	Color (true)	97		PCU	P393061	
	SM 2320 B-2011	Total Alkalinity	119	A	mg CaCO3/L	P393215	
	SM 2540 C-2011	TDS	206		mg/L	P393484	
	SM 2540 D-2011	TSS	2	I	mg/L	P393358	
	SM 4500 F-C-2011	Fluoride	0.088	I	mg F/L	P393218	
2221635	EPA 350.1 Rev. 2.0	Ammonia-N	0.025		mg N/L	P393463	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.36		mg N/L	P393261	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.010		mg N/L	P393191	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P393320	
	SM 5310 B-2011	Organic Carbon	13		mg C/L	P393187	
2221639	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.072		mg P/L	P393113	MS
2221671	EPA 8321B	2,4-D	0.0020	U	ug/L	P392967	
		Acesulfame K	0.10	U	ug/L	P393118	
		AMPA	0.10	U	ug/L	P393118	
		Sucralose	0.010	U	ug/L	P393118	
		Acetaminophen**	0.0080	U	ug/L	P392967	
		Acetamiprid**	0.0020	U	ug/L	P392967	
		Endothall	0.25	U	ug/L	P393118	
		Glufosinate	0.10	U	ug/L	P393118	
		Glyphosate	0.10	U	ug/L	P393118	
		Afidopyropen**	0.0020	U	ug/L	P392967	
		Bentazon	8.0E-04	U	ug/L	P392967	
		Benzovindiflupyr**	0.0020	U	ug/L	P392967	
		Carbamazepine**	8.0E-04	U	ug/L	P392967	
		Clothianidin**	0.0020	U	ug/L	P392967	
		Dinotefuran**	0.0020	U	ug/L	P392967	
		Diuron	0.0020	U	ug/L	P392967	
		Fenuron	0.016	U	ug/L	P392967	
		Fluridone**	8.0E-04	U	ug/L	P392967	
		Imazapyr**	0.046		ug/L	P392967	
		Hydrocodone**	0.0020	U	ug/L	P392967	
		Ibuprofen**	0.020	U	ug/L	P392967	
		Imidacloprid	0.0020	U	ug/L	P392967	
		Linuron	0.0040	U	ug/L	P392967	
		Mandestrobin**	0.0020	U	ug/L	P392967	
		MCPP	0.0020	U	ug/L	P392967	
		Naproxen**	0.0080	U	ug/L	P392967	
		Primidone**	0.0040	U	ug/L	P392967	
		Pyraclostrobin**	0.0020	U	ug/L	P392967	
		Thiamethoxam**	0.0020	U	ug/L	P392967	

Field ID: 27010203 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221671	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P392967	
		Triclopyr**	0.0040	U	ug/L	P392967	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: FB_012621 **Collection Date/Time: 01/26/2021 11:15**

Field ID: FB_012621 Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221645	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P393075	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P393371	
		Sulfate	0.20	U	mg SO4/L	P393374	
	SM 2120 B-2011	Color (true)	2.5	U	PCU	P393060	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P393215	
	SM 2540 C-2011	TDS	15	U	mg/L	P393480	
	SM 2540 D-2011	TSS	2	U	mg/L	P393354	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P393218	
2221646	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P393464	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P393261	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P393192	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P393320	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P393188	
2221647	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P393113	MS
2221675	EPA 8321B	2,4-D	0.0020	U	ug/L	P392967	
		Acesulfame K	0.10	U	ug/L	P393118	
		AMPA	0.10	U	ug/L	P393118	
		Sucralose	0.010	U	ug/L	P393118	
		Acetaminophen**	0.0080	U	ug/L	P392967	
		Acetamiprid**	0.0020	U	ug/L	P392967	
		Endothall	0.25	U	ug/L	P393118	
		Glufosinate	0.10	U	ug/L	P393118	
		Glyphosate	0.10	U	ug/L	P393118	
		Afidopyropen**	0.0020	U	ug/L	P392967	
		Bentazon	8.0E-04	U	ug/L	P392967	
		Benzovindiflupyr**	0.0020	U	ug/L	P392967	
		Carbamazepine**	8.0E-04	U	ug/L	P392967	
		Clothianidin**	0.0020	U	ug/L	P392967	
		Dinotefuran**	0.0020	U	ug/L	P392967	
		Diuron	0.0020	U	ug/L	P392967	
		Fenuron	0.016	U	ug/L	P392967	
		Fluridone**	8.0E-04	U	ug/L	P392967	
		Imazapyr**	0.0040	U	ug/L	P392967	
		Hydrocodone**	0.0020	U	ug/L	P392967	
		Ibuprofen**	0.020	U	ug/L	P392967	
		Imidacloprid	0.0020	U	ug/L	P392967	
		Linuron	0.0040	U	ug/L	P392967	
		Mandestrobin**	0.0020	U	ug/L	P392967	
		MCPP	0.0020	U	ug/L	P392967	
		Naproxen**	0.0080	U	ug/L	P392967	
		Primidone**	0.0040	U	ug/L	P392967	
		Pyraclostrobin**	0.0020	U	ug/L	P392967	
		Thiamethoxam**	0.0020	U	ug/L	P392967	

Field ID: FB_012621 Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221675	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P392967	
		Triclopyr**	0.0040	U	ug/L	P392967	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Pellicer Creek Above Schoolhouse Br **Collection Date/Time: 01/26/2021 12:05**

Field ID: G5NE0598 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221632	EPA 180.1 Rev. 2.0	Turbidity	4.6		NTU	P393074	
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P393371	
		Sulfate	12		mg SO4/L	P393374	
	SM 2120 B-2011	Color (true)	100		PCU	P393061	
	SM 2320 B-2011	Total Alkalinity	107		mg CaCO3/L	P393215	
	SM 2540 C-2011	TDS	196		mg/L	P393484	
	SM 2540 D-2011	TSS	2	I	mg/L	P393358	
	SM 4500 F-C-2011	Fluoride	0.12		mg F/L	P393218	
2221636	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P393464	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.39		mg N/L	P393261	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.017		mg N/L	P393191	
	EPA 365.1 Rev. 2.0	Total-P	0.099		mg P/L	P393320	
	SM 5310 B-2011	Organic Carbon	14		mg C/L	P393187	
2221640	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.074		mg P/L	P393113	MS
2221672	EPA 8321B	2,4-D	0.0020	U	ug/L	P392967	
		Acesulfame K	0.10	U	ug/L	P393118	
		AMPA	0.10	U	ug/L	P393118	
		Sucralose	0.010	U	ug/L	P393118	
		Acetaminophen**	0.0080	U	ug/L	P392967	
		Acetamiprid**	0.0020	U	ug/L	P392967	
		Endothall	0.25	U	ug/L	P393118	
		Glufosinate	0.10	U	ug/L	P393118	
		Glyphosate	0.10	U	ug/L	P393118	
		Afidopyropen**	0.0020	U	ug/L	P392967	
		Bentazon	8.0E-04	U	ug/L	P392967	
		Benzovindiflupyr**	0.0020	U	ug/L	P392967	
		Carbamazepine**	8.0E-04	U	ug/L	P392967	
		Clothianidin**	0.0020	U	ug/L	P392967	
		Dinotefuran**	0.0020	U	ug/L	P392967	
		Diuron	0.0020	U	ug/L	P392967	
		Fenuron	0.016	U	ug/L	P392967	
		Fluridone**	8.0E-04	U	ug/L	P392967	
		Imazapyr**	0.020		ug/L	P392967	
		Hydrocodone**	0.0020	U	ug/L	P392967	
		Ibuprofen**	0.020	U	ug/L	P392967	
		Imidacloprid	0.0020	U	ug/L	P392967	
		Linuron	0.0040	U	ug/L	P392967	
		Mandestrobin**	0.0020	U	ug/L	P392967	
		MCPP	0.0020	U	ug/L	P392967	
		Naproxen**	0.0080	U	ug/L	P392967	
		Primidone**	0.0040	U	ug/L	P392967	
		Pyraclostrobin**	0.0020	U	ug/L	P392967	
		Thiamethoxam**	0.0020	U	ug/L	P392967	

Field ID: G5NE0598 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221672	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P392967	
		Triclopyr**	0.0040	U	ug/L	P392967	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Cracker Branch 1.5mi Above Cr204 **Collection Date/Time: 01/26/2021 13:05**

Field ID: G5NE0580 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221642	EPA 180.1 Rev. 2.0	Turbidity	4.1		NTU	P393074	
	EPA 300.0 Rev. 2.1	Chloride	39		mg Cl/L	P393371	
		Sulfate	4.5		mg SO4/L	P393374	
	SM 2120 B-2011	Color (true)	130		PCU	P393061	
	SM 2320 B-2011	Total Alkalinity	76		mg CaCO3/L	P393215	
	SM 2540 C-2011	TDS	179		mg/L	P393484	
	SM 2540 D-2011	TSS	2	U	mg/L	P393358	
	SM 4500 F-C-2011	Fluoride	0.069	I	mg F/L	P393218	
2221643	EPA 350.1 Rev. 2.0	Ammonia-N	0.016		mg N/L	P393464	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.40		mg N/L	P393261	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.005	I	mg N/L	P393191	
	EPA 365.1 Rev. 2.0	Total-P	0.087		mg P/L	P393320	
	SM 5310 B-2011	Organic Carbon	14		mg C/L	P393187	
2221644	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.067		mg P/L	P393113	MS

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Schoolhouse Branch at RR Tracks **Collection Date/Time: 01/26/2021 12:20**

Field ID: G5NE0599 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221633	EPA 180.1 Rev. 2.0	Turbidity	3.2		NTU	P393074	
	EPA 300.0 Rev. 2.1	Chloride	19		mg Cl/L	P393371	
		Sulfate	5.3		mg SO4/L	P393374	
	SM 2120 B-2011	Color (true)	78	A	PCU	P393059	
	SM 2320 B-2011	Total Alkalinity	78		mg CaCO3/L	P393215	
	SM 2540 C-2011	TDS	135		mg/L	P393484	
	SM 2540 D-2011	TSS	3	I	mg/L	P393358	
	SM 4500 F-C-2011	Fluoride	0.040	I	mg F/L	P393218	
2221637	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P393464	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.25		mg N/L	P393261	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	I	mg N/L	P393191	
	EPA 365.1 Rev. 2.0	Total-P	0.060		mg P/L	P393320	
	SM 5310 B-2011	Organic Carbon	9.0		mg C/L	P393187	
2221641	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.044		mg P/L	P393113	MS
2221673	EPA 8321B	2,4-D	0.0020	U	ug/L	P392967	
		Acesulfame K	0.10	U	ug/L	P393118	
		AMPA	0.10	U	ug/L	P393118	
		Sucralose	0.010	U	ug/L	P393118	
		Acetaminophen**	0.0080	U	ug/L	P392967	
		Acetamiprid**	0.0020	U	ug/L	P392967	
		Endothall	0.25	U	ug/L	P393118	
		Glufosinate	0.10	U	ug/L	P393118	
		Glyphosate	0.10	U	ug/L	P393118	
		Afidopyropen**	0.0020	U	ug/L	P392967	
		Bentazon	8.0E-04	U	ug/L	P392967	
		Benzovindiflupyr**	0.0020	U	ug/L	P392967	
		Carbamazepine**	8.0E-04	U	ug/L	P392967	
		Clothianidin**	0.0020	U	ug/L	P392967	
		Dinotefuran**	0.0020	U	ug/L	P392967	
		Diuron	0.0020	U	ug/L	P392967	
		Fenuron	0.016	U	ug/L	P392967	
		Fluridone**	8.0E-04	U	ug/L	P392967	
		Imazapyr**	0.16		ug/L	P392967	
		Hydrocodone**	0.0020	U	ug/L	P392967	
		Ibuprofen**	0.020	U	ug/L	P392967	
		Imidacloprid	0.0020	U	ug/L	P392967	
		Linuron	0.0040	U	ug/L	P392967	
		Mandestrobin**	0.0020	U	ug/L	P392967	
		MCPP	0.0020	U	ug/L	P392967	
		Naproxen**	0.0080	U	ug/L	P392967	
		Primidone**	0.0040	U	ug/L	P392967	
		Pyraclostrobin**	0.0020	U	ug/L	P392967	
		Thiamethoxam**	0.0020	U	ug/L	P392967	

Field ID: G5NE0599 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221673	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P392967	
		Triclopyr**	0.0040	U	ug/L	P392967	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P393074

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P393075

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393371

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393374

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393463

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393464

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393261

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393191

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393192

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393320

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P393113

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

Reference Method: EPA 8321B
Batch ID: P392967

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: P393118

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

Quality Assurance Report
Method Blank Results

Reference Method: SM 2120 B-2011
Batch ID: P393059

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B-2011
Batch ID: P393060

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B-2011
Batch ID: P393061

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P393215

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

Reference Method: SM 2540 C-2011
Batch ID: P393480

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2011
Batch ID: P393483

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2011
Batch ID: P393484

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P393354

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P393357

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P393358

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P393218

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P393187

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

Reference Method: SM 5310 B-2011
Batch ID: P393188

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393371

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393374

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393463

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393464

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.1		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393261

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393191

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393192

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393320

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P393113

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P392967

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	129		P	30 - 160
Acetaminophen	94.9		P	30 - 160
Acetamiprid	113		P	30 - 160
Afidopyropen	83.0		P	30 - 160
Bentazon	86.7		P	30 - 160
Benzovindiflupyr	80.1		P	30 - 160
Carbamazepine	118		P	30 - 160
Clothianidin	108		P	30 - 160
Dinotefuran	103		P	30 - 160
Diuron	73.0		P	30 - 160
Fenuron	106		P	30 - 160
Fluridone	89.7		P	30 - 160
Hydrocodone	107		P	30 - 160
Ibuprofen	113		P	30 - 160
Imazapyr	103		P	30 - 160
Imidacloprid	114		P	30 - 160
Linuron	81.0		P	30 - 160
Mandestrobin	95.4		P	30 - 160
MCPP	111		P	30 - 160
Naproxen	75.7		P	30 - 160
Primidone	99.3		P	30 - 160
Pyraclostrobin	84.4		P	30 - 160
Thiamethoxam	112		P	30 - 160
Tolfenpyrad	56.3		P	30 - 160
Triclopyr	91.4		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P393118

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	107		P	40 - 150
AMPA	90.4		P	40 - 150
Endothall	96.1		P	40 - 150
Glufosinate	104		P	40 - 150
Glyphosate	97.9		P	40 - 140
Sucralose	109		P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P393059

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	102		P	90 - 110

Reference Method: SM 2120 B-2011
Batch ID: P393060

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	101		P	90 - 110

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 2120 B-2011
Batch ID: P393061

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	102		P	90 - 110

Reference Method: SM 2320 B-2011
Batch ID: P393215

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	95.6		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P393218

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.6		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P393187

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

Reference Method: SM 5310 B-2011
Batch ID: P393188

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.2		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393371

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221630	Chloride	101		P	90 - 110
2221703	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393374

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221630	Sulfate	101		P	90 - 110
2221703	Sulfate	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393463

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221538	Ammonia-N	97.8	98.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393464

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221664	Ammonia-N	95.5	99.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393261

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221637	Kjeldahl Nitrogen	107	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393191

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221588	NO2NO3-N	102	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393192

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221665	NO2NO3-N	100	99.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393320

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221599	Total-P	105	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P393113

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221590	O-Phosphate-P	79.8	79.2	F/F	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P392967

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221551	2,4-D	108	121	P/P	30 - 160
2221551	Acetaminophen	100	114	P/P	30 - 160
2221551	Acetamiprid	106	108	P/P	30 - 160
2221551	Afidopyropen	56.4	65.5	P/P	30 - 160
2221551	Bentazon	68.2	76.8	P/P	30 - 160
2221551	Benzovindiflupyr	84.4	78.5	P/P	30 - 160
2221551	Carbamazepine	97.3	99.6	P/P	30 - 160
2221551	Clothianidin	111	111	P/P	30 - 160
2221551	Dinotefuran	122	122	P/P	30 - 160
2221551	Diuron	67.4	63.8	P/P	30 - 160
2221551	Fenuron	88.9	94.3	P/P	30 - 160
2221551	Fluridone	87.2	76.4	P/P	30 - 160
2221551	Hydrocodone	103	104	P/P	30 - 160
2221551	Ibuprofen	83.2	92.7	P/P	30 - 160
2221551	Imazapyr	108	109	P/P	30 - 160
2221551	Imidacloprid	136	139	P/P	30 - 160
2221551	Linuron	71.0	73.6	P/P	30 - 160
2221551	Mandestrobin	86.6	85.6	P/P	30 - 160
2221551	MCPP	95.4	101	P/P	30 - 160
2221551	Naproxen	77.7	63.8	P/P	30 - 160
2221551	Primidone	106	108	P/P	30 - 160
2221551	Pyraclostrobin	82.9	83.3	P/P	30 - 160
2221551	Thiamethoxam	142	134	P/P	30 - 160
2221551	Tolfenpyrad	60.7	60.8	P/P	30 - 160
2221551	Triclopyr	88.8	85.6	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P393118

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221551	Acesulfame K	126	124	P/P	40 - 150
2221551	AMPA	128	134	P/P	40 - 150
2221551	Endothall	102	96.6	P/P	40 - 150
2221551	Glufosinate	97.2	106	P/P	40 - 150
2221551	Glyphosate	98.3	99.3	P/P	40 - 140
2221551	Sucralose	108	106	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P393218

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221631	Fluoride	102	102	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P393187

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221589	Organic Carbon	98.6	101	P/P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P393188

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221667	Organic Carbon	96.8	96.5	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P393074

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221586	Turbidity	13.5	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P393075

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221704	Turbidity	2.69	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393371

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221630	Chloride	0.656	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393374

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221630	Sulfate	0.709	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393463

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221538	Ammonia-N	0.458	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393464

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221664	Ammonia-N	3.94	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393261

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221637	Kjeldahl Nitrogen	2.43	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393191

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221588	NO2NO3-N	0.482	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393192

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221665	NO2NO3-N	0.881	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393320

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221599	Total-P	0.209	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P393113

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221590	O-Phosphate-P	0.755	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P392967

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221551	2,4-D	9.29	Spike	P	0 - 30
2221551	Acetaminophen	13.3	Spike	P	0 - 30
2221551	Acetamiprid	2.53	Spike	P	0 - 30
2221551	Afidopyropen	15.0	Spike	P	0 - 30
2221551	Bentazon	11.8	Spike	P	0 - 30
2221551	Benzovindiflupyr	7.20	Spike	P	0 - 30
2221551	Carbamazepine	2.22	Spike	P	0 - 30
2221551	Clothianidin	0.473	Spike	P	0 - 30
2221551	Dinotefuran	0.755	Spike	P	0 - 30
2221551	Diuron	5.51	Spike	P	0 - 30
2221551	Fenuron	5.92	Spike	P	0 - 30
2221551	Fluridone	12.4	Spike	P	0 - 30
2221551	Hydrocodone	0.967	Spike	P	0 - 30
2221551	Ibuprofen	10.8	Spike	P	0 - 30
2221551	Imazapyr	0.856	Spike	P	0 - 30
2221551	Imidacloprid	2.05	Spike	P	0 - 30
2221551	Linuron	3.66	Spike	P	0 - 30
2221551	Mandestrobin	1.22	Spike	P	0 - 30
2221551	MCPP	5.69	Spike	P	0 - 30
2221551	Naproxen	19.5	Spike	P	0 - 30
2221551	Primidone	1.16	Spike	P	0 - 30
2221551	Pyraclostrobin	0.471	Spike	P	0 - 30
2221551	Thiamethoxam	6.10	Spike	P	0 - 30
2221551	Tolfenpyrad	0.225	Spike	P	0 - 30
2221551	Triclopyr	3.67	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P393118

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221551	Acesulfame K	2.18	Spike	P	0 - 30
2221551	AMPA	4.41	Spike	P	0 - 30
2221551	Endothall	5.61	Spike	P	0 - 30
2221551	Glufosinate	9.04	Spike	P	0 - 30
2221551	Glyphosate	1.08	Spike	P	0 - 30
2221551	Sucralose	1.11	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P393059

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221633	Color (true)	2.18	Sample	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P393060

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221703	Color (true)	0.779	Sample	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P393061

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221860	Color (true)	0.996	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P393215

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221631	Total Alkalinity	0.608	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P393480

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221211	TDS	0.905	Sample	P	0 - 10

Reference Method: SM 2540 C-2011
Batch ID: P393483

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221527	TDS	4.26	Sample	P	0 - 10

Quality Assurance Report
Precision

Reference Method: SM 2540 C-2011
Batch ID: P393484

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221660	TDS	0.613	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P393218

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221631	Fluoride	0.495	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P393187

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221589	Organic Carbon	1.67	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P393188

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221667	Organic Carbon	0.182	Spike	P	0 - 20

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2221670
Field Sample ID: 27010070

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	90.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	124	P	30 - 160
EPA 8321B	Carbamazepine-d10	66.0	P	30 - 160
EPA 8321B	Diuron-d6	42.8	P	30 - 160
EPA 8321B	Endothall-d6	104	P	40 - 160
EPA 8321B	Endothall-d6	104	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	79.5	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	79.5	P	40 - 160
EPA 8321B	Ibuprofen-d3	80.2	P	30 - 160
EPA 8321B	Primidone-d5	69.6	P	30 - 160
EPA 8321B	Sucralose-d6	114	P	30 - 160
EPA 8321B	Sucralose-d6	114	P	30 - 160

Lab Sample ID: 2221671
Field Sample ID: 27010203

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	90.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	114	P	30 - 160
EPA 8321B	Carbamazepine-d10	64.4	P	30 - 160
EPA 8321B	Diuron-d6	43.9	P	30 - 160
EPA 8321B	Endothall-d6	93.8	P	40 - 160
EPA 8321B	Endothall-d6	93.8	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	75.4	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	75.4	P	40 - 160
EPA 8321B	Ibuprofen-d3	78.2	P	30 - 160
EPA 8321B	Primidone-d5	70.7	P	30 - 160
EPA 8321B	Sucralose-d6	114	P	30 - 160
EPA 8321B	Sucralose-d6	114	P	30 - 160

Lab Sample ID: 2221672
Field Sample ID: G5NE0598

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	96.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	112	P	30 - 160
EPA 8321B	Carbamazepine-d10	68.0	P	30 - 160
EPA 8321B	Diuron-d6	46.0	P	30 - 160
EPA 8321B	Endothall-d6	100	P	40 - 160
EPA 8321B	Endothall-d6	100	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	78.1	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	78.1	P	40 - 160
EPA 8321B	Ibuprofen-d3	66.8	P	30 - 160
EPA 8321B	Primidone-d5	71.1	P	30 - 160
EPA 8321B	Sucralose-d6	114	P	30 - 160
EPA 8321B	Sucralose-d6	114	P	30 - 160

Lab Sample ID: 2221673
Field Sample ID: G5NE0599

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	102	P	30 - 160

Quality Assurance Report
Surrogates

Lab Sample ID: 2221673
Field Sample ID: G5NE0599

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	94.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	73.2	P	30 - 160
EPA 8321B	Diuron-d6	54.3	P	30 - 160
EPA 8321B	Endothall-d6	99.0	P	40 - 160
EPA 8321B	Endothall-d6	99.0	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	73.7	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	73.7	P	40 - 160
EPA 8321B	Ibuprofen-d3	76.0	P	30 - 160
EPA 8321B	Primidone-d5	102	P	30 - 160
EPA 8321B	Sucralose-d6	112	P	30 - 160
EPA 8321B	Sucralose-d6	112	P	30 - 160

Lab Sample ID: 2221674
Field Sample ID: 27010062

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	63.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	100	P	30 - 160
EPA 8321B	Carbamazepine-d10	54.9	P	30 - 160
EPA 8321B	Diuron-d6	33.8	P	30 - 160
EPA 8321B	Endothall-d6	110	P	40 - 160
EPA 8321B	Endothall-d6	110	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	68.0	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	68.0	P	40 - 160
EPA 8321B	Ibuprofen-d3	77.1	P	30 - 160
EPA 8321B	Primidone-d5	44.0	P	30 - 160
EPA 8321B	Sucralose-d6	98.1	P	30 - 160
EPA 8321B	Sucralose-d6	98.1	P	30 - 160

Lab Sample ID: 2221675
Field Sample ID: FB_012621

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	102	P	30 - 160
EPA 8321B	Acetaminophen-d4	85.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	98.3	P	30 - 160
EPA 8321B	Diuron-d6	74.8	P	30 - 160
EPA 8321B	Endothall-d6	88.5	P	40 - 160
EPA 8321B	Endothall-d6	88.5	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	94.5	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	94.5	P	40 - 160
EPA 8321B	Ibuprofen-d3	81.6	P	30 - 160
EPA 8321B	Primidone-d5	91.9	P	30 - 160
EPA 8321B	Sucralose-d6	106	P	30 - 160
EPA 8321B	Sucralose-d6	106	P	30 - 160

Quality Assurance Report
Calibration Verification

Reference Method: SM 2120 B-2011
Run ID: A103286
Included Lab Sample IDs: 2221630, 2221631, 2221632, 2221633, 2221642, 2221645

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	102	P/P	85 - 115
Color (true)	102	101	P/P	85 - 115
Color (true)	102	102	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A103288
Included Lab Sample IDs: 2221630, 2221631, 2221632, 2221633, 2221642, 2221645

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	102	P/P	95 - 105
Turbidity	102	102	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A103306
Included Lab Sample IDs: 2221638, 2221639, 2221640, 2221641, 2221644, 2221647

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

Reference Method: SM 5310 B-2011
Run ID: A103337
Included Lab Sample IDs: 2221634, 2221635, 2221636, 2221637, 2221643, 2221646

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A103338
Included Lab Sample IDs: 2221634, 2221635, 2221636, 2221637, 2221643, 2221646

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

Reference Method: EPA 8321B
Run ID: A103340
Included Lab Sample IDs: 2221670, 2221671, 2221672, 2221673, 2221674, 2221675

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	106	106	P/P	60 - 160
Acesulfame K	106	106	P/P	60 - 160
AMPA	103	99.5	P/P	60 - 160
AMPA	108	103	P/P	60 - 160
Endothall	107	108	P/P	60 - 160
Endothall	93.4	107	P/P	60 - 160
Glufosinate	86.3	82.3	P/P	60 - 160
Glufosinate	89.1	86.3	P/P	60 - 160
Glyphosate	89.0	93.5	P/P	60 - 160
Glyphosate	93.5	94.1	P/P	60 - 160

Quality Assurance Report
Calibration Verification

Reference Method: SM 2320 B-2011
Run ID: A103352
Included Lab Sample IDs: 2221630, 2221631, 2221632, 2221633, 2221642, 2221645

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	93.9	96.2	P/P	90 - 110
Total Alkalinity	96.2	93.9	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Run ID: A103352
Included Lab Sample IDs: 2221630, 2221631, 2221632, 2221633, 2221642, 2221645

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

Reference Method: EPA 8321B
Run ID: A103371
Included Lab Sample IDs: 2221670, 2221671, 2221672, 2221673, 2221674, 2221675

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	116	118	P/P	50 - 150
2,4-D	118	115	P/P	50 - 150
Acetaminophen	102	101	P/P	60 - 160
Acetaminophen	106	102	P/P	60 - 160
Acetamiprid	114	118	P/P	50 - 150
Acetamiprid	119	114	P/P	50 - 150
Afidopyropen	104	107	P/P	50 - 150
Afidopyropen	104	104	P/P	50 - 150
Bentazon	112	115	P/P	50 - 160
Bentazon	119	112	P/P	50 - 160
Benzovindiflupyr	102	105	P/P	50 - 160
Benzovindiflupyr	105	101	P/P	50 - 160
Carbamazepine	108	110	P/P	60 - 150
Carbamazepine	120	108	P/P	60 - 150
Clothianidin	107	102	P/P	60 - 150
Clothianidin	109	107	P/P	60 - 150
Dinotefuran	105	93.8	P/P	50 - 150
Dinotefuran	93.8	104	P/P	50 - 150
Diuron	115	113	P/P	60 - 160
Diuron	118	115	P/P	60 - 160
Fenuron	102	104	P/P	60 - 150
Fenuron	113	102	P/P	60 - 150
Fluridone	103	104	P/P	60 - 160
Fluridone	106	103	P/P	60 - 160
Hydrocodone	100	109	P/P	60 - 150
Hydrocodone	113	100	P/P	60 - 150
Ibuprofen	120	108	P/P	50 - 160
Ibuprofen	124	120	P/P	50 - 160
Imazapyr	107	93.7	P/P	50 - 160
Imazapyr	93.7	104	P/P	50 - 160
Imidacloprid	102	95.6	P/P	60 - 150
Imidacloprid	95.6	98.5	P/P	60 - 150
Linuron	106	120	P/P	60 - 150
Linuron	110	106	P/P	60 - 150
Mandestrobin	110	106	P/P	50 - 150

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A103371
Included Lab Sample IDs: 2221670, 2221671, 2221672, 2221673, 2221674, 2221675

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Mandestrobin	121	110	P/P	50 - 150
MCPP	111	115	P/P	50 - 150
MCPP	115	114	P/P	50 - 150
Naproxen	103	92.7	P/P	50 - 160
Naproxen	92.7	70.0	P/P	50 - 160
Primidone	110	98.9	P/P	60 - 150
Primidone	98.9	111	P/P	60 - 150
Pyraclostrobin	111	113	P/P	60 - 150
Pyraclostrobin	112	111	P/P	60 - 150
Thiamethoxam	104	105	P/P	50 - 150
Thiamethoxam	113	104	P/P	50 - 150
Tolfenpyrad	111	106	P/P	60 - 150
Tolfenpyrad	117	111	P/P	60 - 150
Triclopyr	103	103	P/P	50 - 150
Triclopyr	97.4	103	P/P	50 - 150

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A103395
Included Lab Sample IDs: 2221634, 2221635, 2221636, 2221637, 2221643, 2221646

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.7	97.4	P/P	90 - 110
Kjeldahl Nitrogen	97.4	96.9	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A103412
Included Lab Sample IDs: 2221630, 2221631, 2221632, 2221633, 2221642, 2221645

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A103444
Included Lab Sample IDs: 2221634, 2221635, 2221636, 2221637, 2221643

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	95.4	95.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A103445
Included Lab Sample IDs: 2221646

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.5	97.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A103455
Included Lab Sample IDs: 2221634, 2221635, 2221636, 2221637, 2221643, 2221646

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A103455
Included Lab Sample IDs: 2221634, 2221635, 2221636, 2221637, 2221643, 2221646

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	98.8	P/P	90 - 110
Ammonia-N	97.7	99.1	P/P	90 - 110
Ammonia-N	98.5	97.7	P/P	90 - 110
Ammonia-N	99.1	100	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A103516
Included Lab Sample IDs: 2221670, 2221671, 2221672, 2221673, 2221674, 2221675

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	107	110	P/P	60 - 160
Sucralose	108	107	P/P	60 - 160

* 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					13.5	
	Turbidity					2.69	
EPA 300.0 Rev. 2.1	Chloride	102	101	102		0.656	
	Sulfate	102	101	102		0.709	
EPA 350.1 Rev. 2.0	Ammonia-N	99.7	97.8	98.4			0.458
	Ammonia-N	99.1	95.5	99.8			3.94
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	107	104			2.43
EPA 353.2 Rev. 2.0	NO2NO3-N	102	102	101			0.482
	NO2NO3-N	103	100	99.1			0.881
EPA 365.1 Rev. 2.0	Total-P	104	105	104			0.209
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101	79.8	79.2			0.755
EPA 8321B	2,4-D	129	108	121			9.29
	Acesulfame K	107	126	124			2.18
	Acetaminophen	94.9	100	114			13.3
	Acetamiprid	113	106	108			2.53
	Afidopyropen	83.0	56.4	65.5			15.0
	AMPA	90.4	128	134			4.41
	Bentazon	86.7	68.2	76.8			11.8
	Benzovindiflupyr	80.1	84.4	78.5			7.20
	Carbamazepine	118	97.3	99.6			2.22
	Clothianidin	108	111	111			0.473
	Dinotefuran	103	122	122			0.755
	Diuron	73.0	67.4	63.8			5.51
	Endothall	96.1	102	96.6			5.61
	Fenuron	106	88.9	94.3			5.92
	Fluridone	89.7	87.2	76.4			12.4
	Glufosinate	104	97.2	106			9.04
	Glyphosate	97.9	98.3	99.3			1.08
	Hydrocodone	107	103	104			0.967
	Ibuprofen	113	83.2	92.7			10.8
	Imazapyr	103	108	109			0.856
	Imidacloprid	114	136	139			2.05
	Linuron	81.0	71.0	73.6			3.66
	Mandestrobin	95.4	86.6	85.6			1.22
	MCPP	111	95.4	101			5.69
	Naproxen	75.7	77.7	63.8			19.5
	Primidone	99.3	106	108			1.16
	Pyraclostrobin	84.4	82.9	83.3			0.471
	Sucralose	109	108	106			1.11
	Thiamethoxam	112	142	134			6.10
	Tolfenpyrad	56.3	60.7	60.8			0.225
	Triclopyr	91.4	88.8	85.6			3.67
SM 2120 B-2011	Color (true)	102				2.18	
	Color (true)	101				0.779	
	Color (true)	102				0.996	
SM 2320 B-2011	Total Alkalinity	95.6				0.608	
SM 2540 C-2011	TDS					0.905	
	TDS					4.26	
	TDS					0.613	
SM 4500 F-C-2011	Fluoride	97.6	102	102			0.495
SM 5310 B-2011	Organic Carbon	101	98.6	101			1.67
	Organic Carbon	97.2	96.8	96.5			0.182

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2221630, 2221631, 2221632, 2221633, 2221642, 2221645
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2221630, 2221631, 2221632, 2221633, 2221642, 2221645
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2221630, 2221631, 2221632, 2221633, 2221642, 2221645
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2221634, 2221635, 2221636, 2221637, 2221643, 2221646
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2221634, 2221635, 2221636, 2221637, 2221643, 2221646
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2221634, 2221635, 2221636, 2221637, 2221643, 2221646
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2221634, 2221635, 2221636, 2221637, 2221643, 2221646
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2221638, 2221639, 2221640, 2221641, 2221644, 2221647
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2221670, 2221671, 2221672, 2221673, 2221674, 2221675
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2221670, 2221671, 2221672, 2221673, 2221674, 2221675
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2221630, 2221631, 2221632, 2221633, 2221642, 2221645
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2221630, 2221631, 2221632, 2221633, 2221642, 2221645
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2221630, 2221631, 2221632, 2221633, 2221642, 2221645
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2221630, 2221631, 2221632, 2221633, 2221642, 2221645
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2221630, 2221631, 2221632, 2221633, 2221642, 2221645
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2221634, 2221635, 2221636, 2221637, 2221643, 2221646

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	01/27/2021			01/27/2021 16:06	Yen Ta	2221630, 2221631, 2221632, 2221633, 2221642, 2221645
EPA 300.0 Rev. 2.1	01/27/2021			02/03/2021 21:17	Lipi Saha	2221630
	01/27/2021			02/03/2021 22:05	Lipi Saha	2221631
	01/27/2021			02/03/2021 22:17	Lipi Saha	2221632
	01/27/2021			02/03/2021 22:29	Lipi Saha	2221633
	01/27/2021			02/03/2021 22:41	Lipi Saha	2221642
	01/27/2021			02/03/2021 22:54	Lipi Saha	2221645
EPA 350.1 Rev. 2.0	01/27/2021			02/07/2021 12:17	Ping Hua	2221634
	01/27/2021			02/07/2021 12:24	Ping Hua	2221635
	01/27/2021			02/07/2021 12:51	Ping Hua	2221636
	01/27/2021			02/07/2021 12:53	Ping Hua	2221637
	01/27/2021			02/07/2021 12:54	Ping Hua	2221643
	01/27/2021			02/07/2021 13:05	Ping Hua	2221646
EPA 351.2 Rev. 2.0	01/27/2021	02/02/2021 11:45	Yen Ta	02/03/2021 16:24	Julia Storbeck	2221637
	01/27/2021	02/02/2021 11:45	Yen Ta	02/03/2021 16:31	Julia Storbeck	2221634
	01/27/2021	02/02/2021 11:45	Yen Ta	02/03/2021 16:32	Julia Storbeck	2221635
	01/27/2021	02/02/2021 11:45	Yen Ta	02/03/2021 16:34	Julia Storbeck	2221636
	01/27/2021	02/02/2021 11:45	Yen Ta	02/03/2021 16:39	Julia Storbeck	2221643
	01/27/2021	02/02/2021 11:45	Yen Ta	02/03/2021 16:41	Julia Storbeck	2221646
EPA 353.2 Rev. 2.0	01/27/2021			02/01/2021 09:47	Beverly Y. Sanders	2221634
	01/27/2021			02/01/2021 09:48	Beverly Y. Sanders	2221635
	01/27/2021			02/01/2021 09:50	Beverly Y. Sanders	2221636
	01/27/2021			02/01/2021 09:51	Beverly Y. Sanders	2221637
	01/27/2021			02/01/2021 09:52	Beverly Y. Sanders	2221643
	01/27/2021			02/01/2021 10:06	Beverly Y. Sanders	2221646
EPA 365.1 Rev. 2.0	01/27/2021	02/03/2021 16:16	Madeline Gruver	02/05/2021 12:17	Shengyu Wang	2221634
	01/27/2021	02/03/2021 16:16	Madeline Gruver	02/05/2021 12:18	Shengyu Wang	2221635
	01/27/2021	02/03/2021 16:16	Madeline Gruver	02/05/2021 12:19	Shengyu Wang	2221636
	01/27/2021	02/03/2021 16:16	Madeline Gruver	02/05/2021 12:20	Shengyu Wang	2221637
	01/27/2021	02/03/2021 16:16	Madeline Gruver	02/05/2021 12:21	Shengyu Wang	2221643
	01/27/2021	02/03/2021 16:16	Madeline Gruver	02/05/2021 15:04	Shengyu Wang	2221646
EPA 365.1 Rev. 2.0 dissolved	01/27/2021			01/27/2021 19:25	Virginia P. Brown	2221638
	01/27/2021			01/27/2021 19:30	Virginia P. Brown	2221639
	01/27/2021			01/27/2021 19:31	Virginia P. Brown	2221640
	01/27/2021			01/27/2021 19:32	Virginia P. Brown	2221641
	01/27/2021			01/27/2021 19:33	Virginia P. Brown	2221644
	01/27/2021			01/27/2021 19:34	Virginia P. Brown	2221647
EPA 8321B	01/27/2021	01/29/2021 09:00	Hoor Shaik	01/30/2021 02:17	Juyoung Kim	2221670
	01/27/2021	01/29/2021 09:00	Hoor Shaik	01/30/2021 02:51	Juyoung Kim	2221671

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	01/27/2021	01/29/2021 09:00	Hoor Shaik	01/30/2021 04:01	Juyoung Kim	2221672
	01/27/2021	01/29/2021 09:00	Hoor Shaik	01/30/2021 04:35	Juyoung Kim	2221673
	01/27/2021	01/29/2021 09:00	Hoor Shaik	01/30/2021 05:10	Juyoung Kim	2221674
	01/27/2021	01/29/2021 09:00	Hoor Shaik	01/30/2021 05:45	Juyoung Kim	2221675
	01/27/2021	01/29/2021 10:00	Rebecca Ware	01/29/2021 15:06	Rebecca Ware	2221670
	01/27/2021	01/29/2021 10:00	Rebecca Ware	01/29/2021 15:20	Rebecca Ware	2221671
	01/27/2021	01/29/2021 10:00	Rebecca Ware	01/29/2021 15:33	Rebecca Ware	2221672
	01/27/2021	01/29/2021 10:00	Rebecca Ware	01/29/2021 16:13	Rebecca Ware	2221673
	01/27/2021	01/29/2021 10:00	Rebecca Ware	01/29/2021 16:27	Rebecca Ware	2221674
	01/27/2021	01/29/2021 10:00	Rebecca Ware	01/29/2021 16:41	Rebecca Ware	2221675
	01/27/2021	01/29/2021 10:00	Rebecca Ware	02/09/2021 18:28	Rebecca Ware	2221670
	01/27/2021	01/29/2021 10:00	Rebecca Ware	02/09/2021 18:40	Rebecca Ware	2221671
	01/27/2021	01/29/2021 10:00	Rebecca Ware	02/09/2021 18:52	Rebecca Ware	2221672
	01/27/2021	01/29/2021 10:00	Rebecca Ware	02/09/2021 19:15	Rebecca Ware	2221673
	01/27/2021	01/29/2021 10:00	Rebecca Ware	02/09/2021 19:27	Rebecca Ware	2221674
	01/27/2021	01/29/2021 10:00	Rebecca Ware	02/09/2021 19:39	Rebecca Ware	2221675
SM 2120 B-2011	01/27/2021			01/27/2021 15:59	Blanca Fach	2221633
	01/27/2021			01/27/2021 16:03	Blanca Fach	2221630
	01/27/2021			01/27/2021 16:08	Blanca Fach	2221645
	01/27/2021			01/27/2021 16:17	Blanca Fach	2221631
	01/27/2021			01/27/2021 16:18	Blanca Fach	2221632, 2221642
SM 2320 B-2011	01/27/2021			01/29/2021 22:27	Dale L. Simmons	2221631
	01/27/2021			01/30/2021 01:48	Dale L. Simmons	2221630
	01/27/2021			01/30/2021 02:01	Dale L. Simmons	2221632
	01/27/2021			01/30/2021 02:14	Dale L. Simmons	2221633
	01/27/2021			01/30/2021 02:27	Dale L. Simmons	2221642
	01/27/2021			01/30/2021 02:35	Dale L. Simmons	2221645
SM 2540 C-2011	01/27/2021			01/29/2021 15:32	Yijie Li	2221630, 2221631, 2221632, 2221633, 2221642, 2221645
SM 2540 D-2011	01/27/2021			01/29/2021 15:32	Yijie Li	2221630, 2221631, 2221632, 2221633, 2221642, 2221645
SM 4500 F-C-2011	01/27/2021			01/29/2021 22:16	Dale L. Simmons	2221631
	01/27/2021			01/30/2021 01:48	Dale L. Simmons	2221630
	01/27/2021			01/30/2021 02:01	Dale L. Simmons	2221632
	01/27/2021			01/30/2021 02:14	Dale L. Simmons	2221633
	01/27/2021			01/30/2021 02:27	Dale L. Simmons	2221642
	01/27/2021			01/30/2021 02:35	Dale L. Simmons	2221645
SM 5310 B-2011	01/27/2021			01/30/2021 03:48	Madeline Gruver	2221634
	01/27/2021			01/30/2021 04:00	Madeline Gruver	2221635
	01/27/2021			01/30/2021 04:13	Madeline Gruver	2221636

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-2011	01/27/2021			01/30/2021 04:25	Madeline Gruver	2221637
	01/27/2021			01/30/2021 05:01	Madeline Gruver	2221643
	01/27/2021			01/30/2021 06:27	Madeline Gruver	2221646