

Chemical Analysis Report

CEN-DIST-2020-09-22-01

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

Event Description: **Turnbull/Strickland/Rose**
Request ID: **RQ-2020-09-21-51**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
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Attn: Kalina Warren

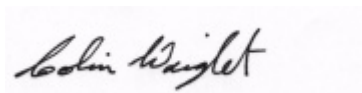
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This Report replaces the previous Report Serial Number: 0125063

Report Comment: Preparation date/time corrected for some analytes. No results modified from the previous report.

Revision certified by: Colin Wright, Program Administrator

Date Certified: 29-OCT-2020 13:30



Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: Strickland Bay @ 100m East (Downstream) Of Rr Crossing **Collection Date/Time: 09/21/2020 12:19**

Field ID: G5CE0081

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2197250	EPA 180.1 Rev. 2.0	Turbidity	9.3		NTU	P387700	
	EPA 300.0 Rev. 2.1	Bromide	3.8		mg Br/L	P388432	
	SM 2320 B-2011	Total Alkalinity	41		mg CaCO3/L	P387796	
	SM 2540 D-2011	TSS	10		mg/L	P387962	
	SM 4500 F-C-2011	Fluoride	0.12		mg F/L	P387798	
2197252	EPA 350.1 Rev. 2.0	Ammonia-N	0.023		mg N/L	P387883	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.85		mg N/L	P387772	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.043		mg N/L	P387742	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P387919	MS
	SM 5310 B-2011	Organic Carbon	24		mg C/L	P387837	
2197254	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.11		mg P/L	P387711	
2197265	EPA 8321B	2,4-D	0.15		ug/L	P387668	
		Acesulfame K**	0.10	U	ug/L	P387746	
		AMPA**	0.11	I	ug/L	P387746	
		Sucralose**	0.16		ug/L	P387746	
		Acetaminophen**	0.0080	U	ug/L	P387668	
		Acetamiprid**	0.0020	U	ug/L	P387668	
		Endothall**	0.25	U	ug/L	P387746	
		Glufosinate**	0.10	U	ug/L	P387746	
		Glyphosate**	0.40		ug/L	P387746	
		Afidopyropen**	0.0020	U	ug/L	P387668	
		Bentazon	0.15		ug/L	P387668	
		Benzovindiflupyr**	0.0020	U	ug/L	P387668	
		Carbamazepine**	8.0E-04	U	ug/L	P387668	
		Clothianidin**	0.013		ug/L	P387668	
		Dinotefuran**	0.0032	I	ug/L	P387668	
		Diuron	0.0020	U	ug/L	P387668	
		Fenuron	0.016	U	ug/L	P387668	
		Fluridone**	0.033		ug/L	P387668	
		Imazapyr**	0.24		ug/L	P387668	
		Hydrocodone**	0.0020	U	ug/L	P387668	
		Ibuprofen**	0.020	U	ug/L	P387668	
		Imidacloprid	0.11		ug/L	P387668	
		Linuron	0.0040	U	ug/L	P387668	
		Mandestrobin**	0.0020	U	ug/L	P387668	
		MCP	0.0020	U	ug/L	P387668	
		Naproxen**	0.0080	U	ug/L	P387668	
		Primidone**	0.0040	U	ug/L	P387668	
		Pyraclostrobin**	0.0020	U	ug/L	P387668	
		Thiamethoxam**	0.0020	U	ug/L	P387668	
		Tolfenpyrad**	0.0020	U	ug/L	P387668	
		Triclopyr**	0.0040	U	ug/L	P387668	

Field ID: G5CE0081

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2197268	EPA 200.7 Rev. 4.4	Iron	1.08E+03		ug/L	P387926	
		Manganese	14.3		ug/L	P387926	
		Zinc	5.0	U	ug/L	P387926	
	EPA 200.8 Rev. 5.4	Aluminum	446		ug/L	P387926	
		Antimony	0.094	I	ug/L	P387926	
		Arsenic	2.06		ug/L	P387926	
		Cadmium	0.020	U	ug/L	P387926	
		Chromium	1.1	I	ug/L	P387926	
		Copper	2.32		ug/L	P387926	
		Lead	0.75		ug/L	P387926	
		Nickel	0.63	I	ug/L	P387926	
		Selenium	0.30	I	ug/L	P387926	
		Silver	0.010	U	ug/L	P387926	
		Thallium	0.10	U	ug/L	P387926	

Ref. Method and Comment:
 SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
 EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Strickland Bay @ 525m East (Downstream) Of Rr Crossing **Collection Date/Time: 09/21/2020 12:07**

Field ID: G5CE0082

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2197251	EPA 180.1 Rev. 2.0	Turbidity	8.8		NTU	P387700	
	EPA 300.0 Rev. 2.1	Bromide	4.6		mg Br/L	P388432	
	SM 2320 B-2011	Total Alkalinity	43		mg CaCO3/L	P387796	
	SM 2540 D-2011	TSS	6	I	mg/L	P387962	
	SM 4500 F-C-2011	Fluoride	0.14		mg F/L	P387798	
2197253	EPA 350.1 Rev. 2.0	Ammonia-N	0.025		mg N/L	P387884	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.95		mg N/L	P387773	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.040		mg N/L	P387742	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P387919	MS
	SM 5310 B-2011	Organic Carbon	24		mg C/L	P387837	
2197255	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.10		mg P/L	P387713	
2197266	EPA 8321B	Acesulfame K**	1.0	U	ug/L	P387746	
		2,4-D	0.16		ug/L	P387668	
		AMPA**	0.10	U	ug/L	P387746	
		Sucralose**	0.17		ug/L	P387746	
		Acetaminophen**	0.0080	U	ug/L	P387668	
		Endothall**	2.5	U	ug/L	P387746	
		Acetamiprid**	0.0020	U	ug/L	P387668	
		Glufosinate**	0.10	U	ug/L	P387746	
		Glyphosate**	0.43		ug/L	P387746	
		Afidopyropen**	0.0020	U	ug/L	P387668	
		Bentazon	0.15		ug/L	P387668	
		Benzovindiflupyr**	0.0020	U	ug/L	P387668	
		Carbamazepine**	8.0E-04	U	ug/L	P387668	
		Clothianidin**	0.011		ug/L	P387668	
		Dinotefuran**	0.0030	I	ug/L	P387668	
		Diuron	0.0020	U	ug/L	P387668	
		Fenuron	0.016	U	ug/L	P387668	
		Fluridone**	0.032		ug/L	P387668	
		Imazapyr**	0.22		ug/L	P387668	
		Hydrocodone**	0.0020	U	ug/L	P387668	
		Ibuprofen**	0.020	U	ug/L	P387668	
		Imidacloprid	0.11		ug/L	P387668	
		Linuron	0.0040	U	ug/L	P387668	
		Mandestrobin**	0.0020	U	ug/L	P387668	
		MCP	0.0021	I	ug/L	P387668	
		Naproxen**	0.0080	U	ug/L	P387668	
		Primidone**	0.0040	U	ug/L	P387668	
		Pyraclostrobin**	0.0020	U	ug/L	P387668	
		Thiamethoxam**	0.0024	I	ug/L	P387668	
		Tolfenpyrad**	0.0020	U	ug/L	P387668	
		Triclopyr**	0.0040	U	ug/L	P387668	

Field ID: G5CE0082

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2197269	EPA 200.7 Rev. 4.4	Iron	1.09E+03		ug/L	P387926	
		Manganese	14.6		ug/L	P387926	
		Zinc	5.0	U	ug/L	P387926	
	EPA 200.8 Rev. 5.4	Aluminum	463		ug/L	P387926	
		Antimony	0.095	I	ug/L	P387926	
		Arsenic	2.04		ug/L	P387926	
		Cadmium	0.020	U	ug/L	P387926	
		Chromium	0.81	I	ug/L	P387926	
		Copper	2.35		ug/L	P387926	
		Lead	0.72		ug/L	P387926	
		Nickel	0.57	I	ug/L	P387926	
		Selenium	0.31	I	ug/L	P387926	
		Silver	0.010	U	ug/L	P387926	
		Thallium	0.10	U	ug/L	P387926	

Ref. Method and Comment:

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

EPA 8321B: MDL for some parameters elevated due to matrix interference.

EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Turnbull Bay @ 640m S Of Divito Park

Collection Date/Time: 09/21/2020 11:47

Field ID: G5CE0100

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2197247	EPA 180.1 Rev. 2.0	Turbidity	10	A	NTU	P387700	
	EPA 300.0 Rev. 2.1	Bromide	2.2		mg Br/L	P388432	
	SM 2320 B-2011	Total Alkalinity	35		mg CaCO3/L	P387796	
	SM 2540 D-2011	TSS	10		mg/L	P387963	
	SM 4500 F-C-2011	Fluoride	0.088	I	mg F/L	P387798	
2197248	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P387885	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.91		mg N/L	P387771	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.040		mg N/L	P388004	
	EPA 365.1 Rev. 2.0	Total-P	0.17		mg P/L	P387918	
	SM 5310 B-2011	Organic Carbon	23		mg C/L	P387838	
2197249	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.11		mg P/L	P387712	
2197267	EPA 200.7 Rev. 4.4	Chromium	3.0	U	ug/L	P387973	
		Iron	1.11E+03		ug/L	P387800	
		Manganese	12		ug/L	P387800	
		Zinc	15	U	ug/L	P387800	
	EPA 200.8 Rev. 5.4	Aluminum	500		ug/L	P387800	
		Antimony	0.50	U	ug/L	P387800	
		Arsenic	2.06		ug/L	P387800	
		Cadmium	0.080	U	ug/L	P387800	
		Copper	2.6	I	ug/L	P387800	
		Lead	0.81	I	ug/L	P387800	
		Nickel	2.0	U	ug/L	P387800	
		Selenium	0.80	U	ug/L	P387800	
		Silver	0.040	U	ug/L	P387800	
		Thallium	0.40	U	ug/L	P387800	

Ref. Method and Comment:

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

EPA 353.2 Rev. 2.0: Sample was analyzed according to conductivity measured in the laboratory, 2070 umhos/cm.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P387700

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387800

Component	Result	Code	Units
Iron	30	U	ug/L
Manganese	1.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387926

Component	Result	Code	Units
Iron	30	U	ug/L
Manganese	1.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387973

Component	Result	Code	Units
Chromium	1.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387800

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387926

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387926

Component	Result	Code	Units
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P388432

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387883

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387884

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387885

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387771

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387772

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387773

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387742

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P388004

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P387918

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P387919

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P387711

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P387712

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P387713

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

Reference Method: EPA 8321B
 Batch ID: P387668

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P387668

Component	Result	Code	Units
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCP	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: P387746

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

Reference Method: SM 2320 B-2011
Batch ID: P387796

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 D-2011
Batch ID: P387962

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P387963

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P387798

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P387837

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P387838

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P387800

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	112		P	85 - 115
Manganese	108		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P387926

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	106		P	85 - 115
Manganese	101		P	85 - 115
Zinc	94.7		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P387973

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chromium	96.0		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P387800

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	105		P	85 - 115
Antimony	108		P	85 - 115
Arsenic	102		P	85 - 115
Cadmium	103		P	85 - 115
Copper	99.4		P	85 - 115
Lead	104		P	85 - 115
Nickel	101		P	85 - 115
Selenium	100		P	85 - 115
Silver	104		P	85 - 115
Thallium	105		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P387926

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	98.4		P	80 - 120
Antimony	102		P	80 - 120
Arsenic	100		P	80 - 120
Cadmium	96.8		P	80 - 120
Chromium	99.7		P	80 - 120
Copper	99.0		P	80 - 120
Lead	97.4		P	80 - 120
Nickel	99.2		P	80 - 120
Selenium	99.6		P	80 - 120
Silver	96.7		P	80 - 120
Thallium	97.9		P	80 - 120

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P388432

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bromide	106		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387883

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387884

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	92.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387885

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387771

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387772

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387773

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387742

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	98.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P388004

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	99.5		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P387918

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	106		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P387919

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	108		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P387711

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P387712

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P387713

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

Reference Method: EPA 8321B
 Batch ID: P387668

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	97.8		P	30 - 160
Acetaminophen	70.1		P	30 - 160
Acetamiprid	67.5		P	30 - 160
Afidopyropen	55.4		P	30 - 160
Bentazon	53.6		P	30 - 160
Benzovindiflupyr	53.1		P	30 - 160
Carbamazepine	56.4		P	30 - 160
Clothianidin	69.8		P	30 - 160
Dinotefuran	80.4		P	30 - 160
Diuron	47.0		P	30 - 160
Fenuron	82.8		P	30 - 160
Fluridone	69.4		P	30 - 160
Hydrocodone	59.9		P	30 - 160
Ibuprofen	53.9		P	30 - 160
Imazapyr	75.6		P	30 - 160
Imidacloprid	86.5		P	30 - 160
Linuron	59.3		P	30 - 160
Mandestrobin	66.1		P	30 - 160
MCPP	97.5		P	30 - 160
Naproxen	75.2		P	30 - 160
Primidone	67.8		P	30 - 160
Pyraclostrobin	53.7		P	30 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P387668

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Thiamethoxam	69.2		P	30 - 160
Tolfenpyrad	35.4		P	30 - 160
Triclopyr	70.8		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P387746

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	98.1		P	40 - 150
AMPA	82.5		P	40 - 150
Endothall	94.7		P	40 - 150
Glufosinate	89.8		P	40 - 150
Glyphosate	101		P	40 - 140
Sucralose	95.8		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P387796

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.6		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P387798

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.3		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P387837

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.8		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P387838

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387800

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197649	Iron	108	110	P/P	70 - 130
2197649	Manganese	105	103	P/P	70 - 130
2197649	Zinc	99.7	98.0	P/P	70 - 130

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387926

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197555	Iron	111	108	P/P	80 - 120
2197555	Manganese	104	104	P/P	80 - 120
2197555	Zinc	96.0	95.9	P/P	80 - 120
2197741	Iron	113		P	80 - 120
2197741	Manganese	105		P	80 - 120
2197741	Zinc	94.2		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387973

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197292	Chromium	97.0	94.8	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387800

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197649	Aluminum	117	118	P/P	70 - 130
2197649	Antimony	117	117	P/P	70 - 130
2197649	Arsenic	117	118	P/P	70 - 130
2197649	Cadmium	110	106	P/P	70 - 130
2197649	Copper	116	115	P/P	70 - 130
2197649	Lead	108	109	P/P	70 - 130
2197649	Nickel	111	110	P/P	70 - 130
2197649	Selenium	120	118	P/P	70 - 130
2197649	Silver	102	103	P/P	70 - 130
2197649	Thallium	107	110	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387926

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197555	Aluminum	98.1	97.4	P/P	80 - 120
2197555	Antimony	101	101	P/P	80 - 120
2197555	Arsenic	99.3	98.9	P/P	80 - 120
2197555	Cadmium	96.9	96.6	P/P	80 - 120
2197555	Chromium	99.1	98.9	P/P	80 - 120
2197555	Copper	98.3	98.1	P/P	80 - 120
2197555	Lead	97.8	96.9	P/P	80 - 120
2197555	Nickel	97.8	97.7	P/P	80 - 120
2197555	Selenium	99.4	97.9	P/P	80 - 120
2197555	Silver	97.3	97.0	P/P	80 - 120
2197555	Thallium	98.5	99.4	P/P	80 - 120
2197741	Aluminum	93.9		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387926

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197741	Antimony	101		P	80 - 120
2197741	Arsenic	96.7		P	80 - 120
2197741	Cadmium	96.2		P	80 - 120
2197741	Chromium	96.3		P	80 - 120
2197741	Copper	95.4		P	80 - 120
2197741	Lead	94.1		P	80 - 120
2197741	Nickel	95.0		P	80 - 120
2197741	Selenium	95.8		P	80 - 120
2197741	Silver	94.8		P	80 - 120
2197741	Thallium	95.2		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P388432

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196936	Bromide	99.0	101	P/P	90 - 110
2197633	Bromide	95.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387883

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197185	Ammonia-N	96.0	96.3	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387884

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197330	Ammonia-N	100	97.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387885

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197248	Ammonia-N	97.9	94.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387771

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197450	Kjeldahl Nitrogen	100	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387772

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197214	Kjeldahl Nitrogen	104	107	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387773

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387773

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197323	Kjeldahl Nitrogen	110	109	F/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387742

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197214	NO2NO3-N	96.8		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P388004

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2198578	NO2NO3-N	96.8	96.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387918

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196642	Total-P	101	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387919

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197217	Total-P	110	111	P/F	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387711

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197186	O-Phosphate-P	101	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387712

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197283	O-Phosphate-P	99.7	99.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387713

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197332	O-Phosphate-P	98.4	99.2	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P387668

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197057	Acetaminophen	77.2	72.4	P/P	30 - 160
2197057	Acetamiprid	65.3	59.4	P/P	30 - 160
2197057	Afidopyropen	54.6	50.4	P/P	30 - 160
2197057	Benzovindiflupyr	60.5	57.8	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P387668

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197057	Carbamazepine	49.7	46.7	P/P	30 - 160
2197057	Clothianidin	61.0	61.2	P/P	30 - 160
2197057	Dinotefuran	89.2	81.2	P/P	30 - 160
2197057	Diuron	39.4	41.2	P/P	30 - 160
2197057	Fenuron	75.4	73.8	P/P	30 - 160
2197057	Hydrocodone	70.1	66.4	P/P	30 - 160
2197057	Ibuprofen	52.5	50.9	P/P	30 - 160
2197057	Linuron	50.4	54.0	P/P	30 - 160
2197057	Mandestrobin	65.5	66.3	P/P	30 - 160
2197057	MCCP	94.0	86.9	P/P	30 - 160
2197057	Naproxen	116	109	P/P	30 - 160
2197057	Primidone	75.0	71.4	P/P	30 - 160
2197057	Pyraclostrobin	59.9	54.1	P/P	30 - 160
2197057	Thiamethoxam	88.4	86.8	P/P	30 - 160
2197057	Tolfenpyrad	44.2	38.0	P/P	30 - 160
2197057	Triclopyr	72.9	78.7	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P387746

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197190	Acesulfame K	114	119	P/P	40 - 150
2197190	AMPA	114	117	P/P	40 - 150
2197190	Endothall	107	93.8	P/P	40 - 150
2197190	Glufosinate	83.8	94.5	P/P	40 - 150
2197190	Glyphosate	82.6	80.4	P/P	40 - 140
2197190	Sucralose	99.1	102	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P387798

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197275	Fluoride	99.8	98.6	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P387837

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197335	Organic Carbon	99.4	97.9	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P387838

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197570	Organic Carbon	96.3	97.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P387700

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197247	Turbidity	1.94	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387800

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197649	Iron	1.73	Spike	P	0 - 20
2197649	Manganese	2.05	Spike	P	0 - 20
2197649	Zinc	1.73	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387926

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197555	Iron	1.97	Spike	P	0 - 20
2197555	Manganese	0.369	Spike	P	0 - 20
2197555	Zinc	0.132	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387973

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197292	Chromium	2.21	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387800

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197649	Aluminum	0.673	Spike	P	0 - 20
2197649	Antimony	0.196	Spike	P	0 - 20
2197649	Arsenic	0.770	Spike	P	0 - 20
2197649	Cadmium	3.85	Spike	P	0 - 20
2197649	Copper	0.942	Spike	P	0 - 20
2197649	Lead	0.566	Spike	P	0 - 20
2197649	Nickel	0.326	Spike	P	0 - 20
2197649	Selenium	1.44	Spike	P	0 - 20
2197649	Silver	0.915	Spike	P	0 - 20
2197649	Thallium	3.35	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387926

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197555	Aluminum	0.688	Spike	P	0 - 20
2197555	Antimony	0.0840	Spike	P	0 - 20
2197555	Arsenic	0.402	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387926

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197555	Cadmium	0.379	Spike	P	0 - 20
2197555	Chromium	0.187	Spike	P	0 - 20
2197555	Copper	0.189	Spike	P	0 - 20
2197555	Lead	0.953	Spike	P	0 - 20
2197555	Nickel	0.111	Spike	P	0 - 20
2197555	Selenium	1.57	Spike	P	0 - 20
2197555	Silver	0.312	Spike	P	0 - 20
2197555	Thallium	0.952	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P388432

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196936	Bromide	1.83	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387883

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197185	Ammonia-N	0.243	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387884

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197330	Ammonia-N	1.43	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387885

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197248	Ammonia-N	2.57	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387771

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197450	Kjeldahl Nitrogen	1.98	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387772

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197214	Kjeldahl Nitrogen	2.17	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387773

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197323	Kjeldahl Nitrogen	0.595	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387742

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197214	NO2NO3-N	0.487	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P388004

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198578	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387918

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196642	Total-P	0.0247	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387919

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197217	Total-P	1.44	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387711

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197186	O-Phosphate-P	0.198	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387712

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197283	O-Phosphate-P	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387713

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197332	O-Phosphate-P	0.810	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P387668

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197057	2,4-D	4.75	Spike	P	0 - 30
2197057	Acetaminophen	6.44	Spike	P	0 - 30
2197057	Acetamiprid	9.37	Spike	P	0 - 30
2197057	Afidopyropen	8.08	Spike	P	0 - 30
2197057	Bentazon	11.1	Spike	P	0 - 30
2197057	Benzovindiflupyr	4.71	Spike	P	0 - 30
2197057	Carbamazepine	6.15	Spike	P	0 - 30
2197057	Clothianidin	0.184	Spike	P	0 - 30
2197057	Dinotefuran	9.31	Spike	P	0 - 30
2197057	Diuron	3.77	Spike	P	0 - 30
2197057	Fenuron	2.08	Spike	P	0 - 30
2197057	Fluridone	5.52	Spike	P	0 - 30
2197057	Hydrocodone	5.47	Spike	P	0 - 30
2197057	Ibuprofen	3.12	Spike	P	0 - 30
2197057	Imazapyr	7.01	Spike	P	0 - 30
2197057	Imidacloprid	3.58	Spike	P	0 - 30
2197057	Linuron	6.85	Spike	P	0 - 30
2197057	Mandestrobin	1.24	Spike	P	0 - 30
2197057	MCPP	7.90	Spike	P	0 - 30
2197057	Naproxen	6.51	Spike	P	0 - 30
2197057	Primidone	4.95	Spike	P	0 - 30
2197057	Pyraclostrobin	10.3	Spike	P	0 - 30
2197057	Thiamethoxam	1.64	Spike	P	0 - 30
2197057	Tolfenpyrad	15.3	Spike	P	0 - 30
2197057	Triclopyr	7.62	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P387746

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197190	Acesulfame K	4.24	Spike	P	0 - 30
2197190	AMPA	1.86	Spike	P	0 - 30
2197190	Endothall	13.0	Spike	P	0 - 30
2197190	Glufosinate	12.0	Spike	P	0 - 30
2197190	Glyphosate	2.62	Spike	P	0 - 30
2197190	Sucralose	2.90	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P387796

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197275	Total Alkalinity	3.16	Sample	P	0 - 8.1

Reference Method: SM 4500 F-C-2011
Batch ID: P387798

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197275	Fluoride	0.983	Spike	P	0 - 2.8

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P387837

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197335	Organic Carbon	0.897	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P387838

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197570	Organic Carbon	0.655	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2197265
Field Sample ID: G5CE0081

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	73.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	76.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	44.5	P	30 - 160
EPA 8321B	Diuron-d6	42.7	P	30 - 160
EPA 8321B	Endothall-d6	159	P	30 - 160
EPA 8321B	Endothall-d6	159	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	46.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	46.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	73.0	P	30 - 160
EPA 8321B	Primidone-d5	78.9	P	30 - 160
EPA 8321B	Sucralose-d6	32.5	P	30 - 160
EPA 8321B	Sucralose-d6	32.5	P	30 - 160

Lab Sample ID: 2197266
Field Sample ID: G5CE0082

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	64.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	68.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	47.3	P	30 - 160
EPA 8321B	Diuron-d6	42.5	P	30 - 160
EPA 8321B	Endothall-d6	75.5	P	30 - 160
EPA 8321B	Endothall-d6	75.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	44.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	44.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	75.9	P	30 - 160
EPA 8321B	Primidone-d5	66.5	P	30 - 160
EPA 8321B	Sucralose-d6	31.8	P	30 - 160
EPA 8321B	Sucralose-d6	31.8	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A101139

Included Lab Sample IDs: 2197247, 2197250, 2197251

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	100	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A101150

Included Lab Sample IDs: 2197249, 2197254, 2197255

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.1	99.8	P/P	90 - 110
O-Phosphate-P	99.3	98.8	P/P	90 - 110
O-Phosphate-P	99.8	99.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A101159

Included Lab Sample IDs: 2197252, 2197253

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

Reference Method: SM 2320 B-2011

Run ID: A101178

Included Lab Sample IDs: 2197247, 2197250, 2197251

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.6	98.4	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A101178

Included Lab Sample IDs: 2197247, 2197250, 2197251

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

Reference Method: EPA 8321B

Run ID: A101191

Included Lab Sample IDs: 2197265, 2197266

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	90.8	93.8	P/P	60 - 160
Acesulfame K	98.0	88.1	P/P	60 - 160
Endothall	112	109	P/P	60 - 160
Endothall	88.8	107	P/P	60 - 160

Reference Method: SM 5310 B-2011

Run ID: A101194

Included Lab Sample IDs: 2197248, 2197252, 2197253

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.3	98.9	P/P	90 - 110
Organic Carbon	99.5	99.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A101208

Included Lab Sample IDs: 2197252, 2197253

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.6	94.1	P/P	90 - 110
Kjeldahl Nitrogen	94.1	95.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A101210

Included Lab Sample IDs: 2197248, 2197252, 2197253

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	96.6	P/P	90 - 110
Ammonia-N	99.4	99.4	P/P	90 - 110
Ammonia-N	99.4	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A101216

Included Lab Sample IDs: 2197248

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.0	93.6	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A101217

Included Lab Sample IDs: 2197267

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	106	106	P/P	90 - 110
Manganese	105	105	P/P	90 - 110
Zinc	100	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A101224

Included Lab Sample IDs: 2197265, 2197266

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	78.4	71.8	P/P	60 - 160
Glufosinate	95.8	96.7	P/P	60 - 160
Glyphosate	99.7	97.1	P/P	60 - 160

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A101267

Included Lab Sample IDs: 2197268, 2197269

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	102	102	P/P	95 - 105
Manganese	99.7	101	P/P	95 - 105
Zinc	96.6	96.2	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A101272

Included Lab Sample IDs: 2197248

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A101272

Included Lab Sample IDs: 2197248

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A101274

Included Lab Sample IDs: 2197248

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	103	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A101284

Included Lab Sample IDs: 2197252, 2197253

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

Reference Method: EPA 8321B

Run ID: A101289

Included Lab Sample IDs: 2197265, 2197266

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	97.0	123	P/P	50 - 150
Acetaminophen	110	125	P/P	60 - 160
Acetamiprid	119	122	P/P	50 - 150
Afidopyropen	100	95.6	P/P	50 - 150
Bentazon	157	150	P/P	50 - 160
Benzovindiflupyr	114	107	P/P	50 - 150
Carbamazepine	105	103	P/P	60 - 150
Clothianidin	95.9	117	P/P	60 - 150
Dinotefuran	97.5	111	P/P	50 - 150
Diuron	104	104	P/P	60 - 160
Fenuron	111	121	P/P	60 - 150
Fluridone	128	113	P/P	60 - 160
Hydrocodone	112	113	P/P	60 - 150
Ibuprofen	100	87.5	P/P	50 - 160
Imazapyr	98.0	130	P/P	50 - 160
Imidacloprid	105	109	P/P	60 - 150
Linuron	114	112	P/P	60 - 150
Mandestrobin	107	104	P/P	50 - 150
MCPP	125	136	P/P	50 - 150
Naproxen	108	102	P/P	50 - 160
Primidone	101	127	P/P	60 - 150
Pyraclostrobin	106	103	P/P	60 - 150
Thiamethoxam	124	137	P/P	50 - 150
Tolfenpyrad	106	106	P/P	60 - 150
Triclopyr	117	130	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A101291

Included Lab Sample IDs: 2197267

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	98.0	100	P/P	95 - 105

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A101296

Included Lab Sample IDs: 2197267

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	105	105	P/P	90 - 110
Antimony	108	108	P/P	90 - 110
Arsenic	99.7	100	P/P	90 - 110
Cadmium	100	101	P/P	90 - 110
Copper	99.6	110	P/P	90 - 110
Lead	101	101	P/P	90 - 110
Nickel	97.4	107	P/P	90 - 110
Selenium	101	105	P/P	90 - 110
Silver	102	101	P/P	90 - 110
Thallium	96.5	94.6	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A101347

Included Lab Sample IDs: 2197268, 2197269

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.5	97.2	P/P	90 - 110
Antimony	105	103	P/P	90 - 110
Arsenic	98.1	96.2	P/P	90 - 110
Cadmium	98.3	96.0	P/P	90 - 110
Chromium	97.8	97.1	P/P	90 - 110
Copper	96.5	94.6	P/P	90 - 110
Lead	98.0	96.8	P/P	90 - 110
Nickel	96.4	95.2	P/P	90 - 110
Selenium	97.3	98.6	P/P	90 - 110
Silver	99.4	96.8	P/P	90 - 110
Thallium	94.6	93.7	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A101350

Included Lab Sample IDs: 2197265, 2197266

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	99.2	101	P/P	60 - 160

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A101391

Included Lab Sample IDs: 2197247, 2197250, 2197251

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	102	101	P/P	90 - 110
Bromide	98.0	102	P/P	90 - 110

Quality Assurance Report

Calibration Verification

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						1.94	
EPA 200.7 Rev. 4.4	Chromium	96.0	97.0	94.8				2.21
	Iron	112	108	110				1.73
	Iron	106	111	108	113			1.97
	Manganese	108	105	103				2.05
	Manganese	101	104	104	105			0.369
	Zinc	101	99.7	98.0				1.73
	Zinc	94.7	96.0	95.9	94.2			0.132
EPA 200.8 Rev. 5.4	Aluminum	105	117	118				0.673
	Aluminum	98.4	98.1	97.4	93.9			0.688
	Antimony	108	117	117				0.196
	Antimony	102	101	101	101			0.0840
	Arsenic	102	117	118				0.770
	Arsenic	100	99.3	98.9	96.7			0.402
	Cadmium	103	110	106				3.85
	Cadmium	96.8	96.9	96.6	96.2			0.379
	Chromium	99.7	99.1	98.9	96.3			0.187
	Copper	99.4	116	115				0.942
	Copper	99.0	98.3	98.1	95.4			0.189
	Lead	104	108	109				0.566
	Lead	97.4	97.8	96.9	94.1			0.953
	Nickel	101	111	110				0.326
	Nickel	99.2	97.8	97.7	95.0			0.111
	Selenium	100	120	118				1.44
	Selenium	99.6	99.4	97.9	95.8			1.57
	Silver	104	102	103				0.915
	Silver	96.7	97.3	97.0	94.8			0.312
	Thallium	105	107	110				3.35
	Thallium	97.9	98.5	99.4	95.2			0.952
EPA 300.0 Rev. 2.1	Bromide	106	99.0	101	95.7			1.83
EPA 350.1 Rev. 2.0	Ammonia-N	101	96.0	96.3				0.243
	Ammonia-N	92.6	100	97.2				1.43
	Ammonia-N	101	97.9	94.3				2.57
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107	100	102				1.98
	Kjeldahl Nitrogen	107	104	107				2.17
	Kjeldahl Nitrogen	107	110	109				0.595
EPA 353.2 Rev. 2.0	NO2NO3-N	98.5	96.8					0.487
	NO2NO3-N	99.5	96.8	96.8				0.0
EPA 365.1 Rev. 2.0	Total-P	106	101	101				0.0247
	Total-P	108	110	111				1.44
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100	101	101				0.198
	O-Phosphate-P	100	99.7	99.7				0.0
	O-Phosphate-P	101	98.4	99.2				0.810
EPA 8321B	2,4-D	97.8						4.75
	Acesulfame K	98.1	114	119				4.24
	Acetaminophen	70.1	77.2	72.4				6.44
	Acetamiprid	67.5	65.3	59.4				9.37
	Afidopyropen	55.4	54.6	50.4				8.08
	AMPA	82.5	114	117				1.86
	Bentazon	53.6						11.1
	Benzovindiflupyr	53.1	60.5	57.8				4.71
	Carbamazepine	56.4	49.7	46.7				6.15
	Clothianidin	69.8	61.0	61.2				0.184
	Dinotefuran	80.4	89.2	81.2				9.31

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8321B	Diuron	47.0	39.4	41.2			3.77
	Endothall	94.7	107	93.8			13.0
	Fenuron	82.8	75.4	73.8			2.08
	Fluridone	69.4					5.52
	Glufosinate	89.8	83.8	94.5			12.0
	Glyphosate	101	82.6	80.4			2.62
	Hydrocodone	59.9	70.1	66.4			5.47
	Ibuprofen	53.9	52.5	50.9			3.12
	Imazapyr	75.6					7.01
	Imidacloprid	86.5					3.58
	Linuron	59.3	50.4	54.0			6.85
	Mandestrobin	66.1	65.5	66.3			1.24
	MCPP	97.5	94.0	86.9			7.90
	Naproxen	75.2	116	109			6.51
	Primidone	67.8	75.0	71.4			4.95
	Pyraclostrobin	53.7	59.9	54.1			10.3
	Sucralose	95.8	99.1	102			2.90
	Thiamethoxam	69.2	88.4	86.8			1.64
	Tolfenpyrad	35.4	44.2	38.0			15.3
	Triclopyr	70.8	72.9	78.7			7.62
SM 2320 B-2011	Total Alkalinity	99.6				3.16	
SM 4500 F-C-2011	Fluoride	99.3	99.8	98.6			0.983
SM 5310 B-2011	Organic Carbon	97.8	99.4	97.9			0.897
	Organic Carbon	97.8	96.3	97.0			0.655

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2197247, 2197250, 2197251
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2197267, 2197268, 2197269
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2197267, 2197268, 2197269
EPA 300.0 Rev. 2.1	Bromide in aqueous matrices	2197247, 2197250, 2197251
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2197248, 2197252, 2197253
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2197248, 2197252, 2197253
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2197248, 2197252, 2197253
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2197248, 2197252, 2197253
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2197249, 2197254, 2197255
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2197265, 2197266
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2197265, 2197266
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2197247, 2197250, 2197251
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2197247, 2197250, 2197251
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2197247, 2197250, 2197251
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2197248, 2197252, 2197253

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	09/22/2020			09/22/2020 16:38	Yen Ta	2197247, 2197250, 2197251
EPA 200.7 Rev. 4.4	09/22/2020	09/24/2020 13:15	Elliott D. Healy	09/25/2020 22:55	Betina Topolski	2197267
	09/22/2020	09/28/2020 14:35	Elliott D. Healy	09/29/2020 13:36	Betina Topolski	2197268
	09/22/2020	09/28/2020 14:35	Elliott D. Healy	09/29/2020 13:44	Betina Topolski	2197269
	09/22/2020	09/29/2020 15:30	Elliott D. Healy	09/30/2020 13:26	Betina Topolski	2197267
EPA 200.8 Rev. 5.4	09/22/2020	09/24/2020 13:15	Elliott D. Healy	09/30/2020 18:47	Alexander Thompson	2197267
	09/22/2020	09/24/2020 13:15	Elliott D. Healy	09/30/2020 20:26	Alexander Thompson	2197267
	09/22/2020	09/28/2020 14:35	Elliott D. Healy	10/03/2020 16:20	Alexander Thompson	2197268
	09/22/2020	09/28/2020 14:35	Elliott D. Healy	10/03/2020 16:27	Alexander Thompson	2197269
EPA 300.0 Rev. 2.1	09/22/2020			10/08/2020 14:34	Lipi Saha	2197247
	09/22/2020			10/08/2020 14:51	Lipi Saha	2197250
	09/22/2020			10/08/2020 15:42	Lipi Saha	2197251
EPA 350.1 Rev. 2.0	09/22/2020			09/26/2020 12:06	Ping Hua	2197252
	09/22/2020			09/26/2020 12:22	Ping Hua	2197253
	09/22/2020			09/26/2020 12:55	Ping Hua	2197248
EPA 351.2 Rev. 2.0	09/22/2020	09/23/2020 17:26	David Boose	09/25/2020 14:59	Elliott Rodriguez	2197252
	09/22/2020	09/23/2020 17:26	David Boose	09/25/2020 15:12	Elliott Rodriguez	2197253
	09/22/2020	09/23/2020 19:10	David Boose	09/25/2020 17:04	Elliott Rodriguez	2197248
EPA 353.2 Rev. 2.0	09/22/2020			09/23/2020 10:46	Beverly Y. Sanders	2197252
	09/22/2020			09/23/2020 10:47	Beverly Y. Sanders	2197253
	09/22/2020			09/30/2020 09:08	Beverly Y. Sanders	2197248
EPA 365.1 Rev. 2.0	09/22/2020	09/28/2020 12:44	Yen Ta	09/29/2020 13:08	Benjamin T. Nordmann	2197248
	09/22/2020	09/28/2020 12:44	Yen Ta	09/29/2020 14:49	Benjamin T. Nordmann	2197252
	09/22/2020	09/28/2020 12:44	Yen Ta	09/29/2020 14:50	Benjamin T. Nordmann	2197253
EPA 365.1 Rev. 2.0 dissolved	09/22/2020			09/22/2020 16:06	Virginia P. Brown	2197249
	09/22/2020			09/22/2020 16:16	Virginia P. Brown	2197255
	09/22/2020			09/22/2020 16:39	Virginia P. Brown	2197254
EPA 8321B	09/22/2020	09/23/2020 12:15	Hoor Shaik	09/25/2020 12:23	Juyoung Kim	2197265
	09/22/2020	09/23/2020 12:15	Hoor Shaik	09/25/2020 12:58	Juyoung Kim	2197266
	09/22/2020	09/23/2020 12:15	Hoor Shaik	09/29/2020 15:53	Juyoung Kim	2197265
	09/22/2020	09/23/2020 12:15	Hoor Shaik	09/29/2020 16:28	Juyoung Kim	2197266
	09/22/2020	09/24/2020 09:45	Rebecca Ware	09/24/2020 14:52	Rebecca Ware	2197265
	09/22/2020	09/24/2020 09:45	Rebecca Ware	09/24/2020 19:01	Rebecca Ware	2197266
	09/22/2020	09/24/2020 09:45	Rebecca Ware	09/25/2020 12:13	Rebecca Ware	2197265
	09/22/2020	09/24/2020 09:45	Rebecca Ware	09/25/2020 12:24	Rebecca Ware	2197266
	09/22/2020	09/24/2020 09:45	Rebecca Ware	09/30/2020 13:29	Rebecca Ware	2197265
	09/22/2020	09/24/2020 09:45	Rebecca Ware	09/30/2020 13:41	Rebecca Ware	2197266
SM 2320 B-2011	09/22/2020			09/23/2020 19:32	Dale L. Simmons	2197247
	09/22/2020			09/23/2020 19:53	Dale L. Simmons	2197250
	09/22/2020			09/23/2020 20:05	Dale L. Simmons	2197251

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2540 D-2011	09/22/2020			09/23/2020 14:41	Yijie Li	2197247, 2197250, 2197251
SM 4500 F-C-2011	09/22/2020			09/23/2020 19:32	Dale L. Simmons	2197247
	09/22/2020			09/23/2020 19:53	Dale L. Simmons	2197250
	09/22/2020			09/23/2020 20:05	Dale L. Simmons	2197251
SM 5310 B-2011	09/22/2020			09/25/2020 00:52	Madeline Gruver	2197252
	09/22/2020			09/25/2020 01:05	Madeline Gruver	2197253
	09/22/2020			09/25/2020 07:37	Madeline Gruver	2197248