

Chemical Analysis Report

SO-DIST-2021-07-30-01

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

Event Description: **2021 SMP : Myakka Cricks**

Request ID: **RQ-2021-07-26-64**

Customer: **SO-DIST**

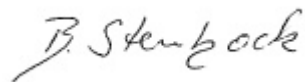
Project ID: **SMP**

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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 26-AUG-2021 13:28



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: Little Alligator Creek @ Midway Blvd

Collection Date/Time: 07/29/2021 09:40

Field ID: G3SD0071

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2266068	EPA 180.1 Rev. 2.0	Turbidity	5.0		NTU	P401778	
	SM 2320 B-2011	Total Alkalinity	137		mg CaCO3/L	P402115	
	SM 2540 D-2011	TSS	5	IA	mg/L	P402228	
	SM 4500 F-C-2011	Fluoride	0.50		mg F/L	P401941	
2266069	EPA 350.1 Rev. 2.0	Ammonia-N	0.11		mg N/L	P402268	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P402781	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.036		mg N/L	P401871	
	EPA 365.1 Rev. 2.0	Total-P	0.37		mg P/L	P401840	MS
	SM 5310 B-2011	Organic Carbon	13		mg C/L	P402468	
2266070	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.27		mg P/L	P401769	
2266096	EPA 200.7 Rev. 4.4	Calcium	136		mg/L	P402037	
		Iron	270	I	ug/L	P402037	
		Magnesium	253		mg/L	P402037	
		Manganese	28		ug/L	P402037	
		Zinc	15	U	ug/L	P402037	
	EPA 200.8 Rev. 5.4	Aluminum	67	I	ug/L	P402037	
		Antimony	0.28	I	ug/L	P402037	
		Arsenic	3.77		ug/L	P402037	
		Beryllium	0.040	U	ug/L	P402037	
		Cadmium	0.080	U	ug/L	P402037	
		Chromium	1.6	U	ug/L	P402037	
		Copper	1.6	U	ug/L	P402037	
		Lead	0.80	U	ug/L	P402037	
		Nickel	2.0	U	ug/L	P402037	
		Selenium	0.80	U	ug/L	P402037	
		Silver	0.040	U	ug/L	P402037	
		Thallium	0.40	U	ug/L	P402037	

Ref. Method and Comment:

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

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium and magnesium are unavailable because of high analyte concentration in the QC sample.

Sample Location: Rock Creek @ Eisenhower Dr

Collection Date/Time: 07/29/2021 10:20

Field ID: G3SD0070

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2266065	EPA 180.1 Rev. 2.0	Turbidity	5.1		NTU	P401778	
	SM 2320 B-2011	Total Alkalinity	84		mg CaCO3/L	P401937	
	SM 2540 D-2011	TSS	6	I	mg/L	P402226	
	SM 4500 F-C-2011	Fluoride	0.26		mg F/L	P401939	
2266066	EPA 350.1 Rev. 2.0	Ammonia-N	0.16		mg N/L	P402257	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P402635	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.084		mg N/L	P401809	
	EPA 365.1 Rev. 2.0	Total-P	0.62		mg P/L	P401843	
	SM 5310 B-2011	Organic Carbon	23		mg C/L	P402468	
2266067	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.47		mg P/L	P401768	
2266087	EPA 8321B	2,4-D	0.033		ug/L	P401918	
		Acesulfame K	0.10	U	ug/L	P401726	
		2,4,5-T	0.0040	U	ug/L	P401918	
		AMPA	0.42		ug/L	P401726	
		Acetaminophen	0.018	I	ug/L	P401918	
		Acetamiprid	0.0020	U	ug/L	P401918	
		Endothall	0.25	U	ug/L	P401726	
		Glufosinate	0.10	U	ug/L	P401726	
		Glyphosate	0.68		ug/L	P401726	
		Afidopyropen	0.0020	U	ug/L	P401918	
		Bentazon	0.011		ug/L	P401918	
		Sucralose	0.28		ug/L	P401726	
		Benzovindiflupyr	0.0020	U	ug/L	P401918	
		Carbamazepine	0.0016	I	ug/L	P401918	
		Clothianidin	0.0047	I	ug/L	P401918	
		Dinotefuran	0.027		ug/L	P401918	
		Diuron	0.0049	I	ug/L	P401918	
		Fenuron	0.016	U	ug/L	P401918	
		Fluridone	0.012		ug/L	P401918	
		Imazapyr	0.053		ug/L	P401918	
		Hydrocodone	0.0020	U	ug/L	P401918	
		Ibuprofen	0.020	U	ug/L	P401918	
		Imidacloprid	0.034		ug/L	P401918	
		Linuron	0.0040	U	ug/L	P401918	
		Mandestrobin	0.0020	U	ug/L	P401918	
		MCP	0.0020	U	ug/L	P401918	
		Naproxen	0.0080	U	ug/L	P401918	
		Primidone	0.0040	U	ug/L	P401918	
		Pyraclostrobin	0.0020	U	ug/L	P401918	
		Thiamethoxam	0.010		ug/L	P401918	
		Tolfenpyrad	0.0020	U	ug/L	P401918	MS
		Triclopyr	0.0040	U	ug/L	P401918	
2266095	EPA 200.7 Rev. 4.4	Calcium	51.9		mg/L	P401881	

Field ID: G3SD0070

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2266095	EPA 200.7 Rev. 4.4	Iron	1.04E+03		ug/L	P401881	
		Magnesium	35.7		mg/L	P401881	
		Manganese	41.9		ug/L	P401881	
		Zinc	5.0	U	ug/L	P402375	
	EPA 200.8 Rev. 5.4	Aluminum	157		ug/L	P401881	
		Antimony	0.15	I	ug/L	P401881	
		Arsenic	2.41		ug/L	P401881	
		Beryllium	0.020	I	ug/L	P401881	
		Cadmium	0.020	U	ug/L	P401881	
		Chromium	1.0	I	ug/L	P401881	
		Copper	0.90		ug/L	P402262	
		Lead	0.46		ug/L	P401881	
		Nickel	1.1	I	ug/L	P401881	
		Selenium	0.23	I	ug/L	P401881	
		Silver	0.010	U	ug/L	P401881	
		Thallium	0.10	U	ug/L	P401881	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: FB

Collection Date/Time: 07/29/2021 10:35

Field ID: FB_07292021

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2266071	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P401778	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P401937	
	SM 2540 D-2011	TSS	2	U	mg/L	P402226	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P401939	
2266072	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P402257	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P402527	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P401809	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P401843	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P402468	
2266073	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P401768	
2266088	EPA 8321B	2,4-D	0.0020	U	ug/L	P401918	
		Acesulfame K	0.10	U	ug/L	P401726	
		2,4,5-T	0.0040	U	ug/L	P401918	
		AMPA	0.10	U	ug/L	P401726	
		Acetaminophen	0.0080	U	ug/L	P401918	
		Acetamiprid	0.0020	U	ug/L	P401918	
		Endothall	0.25	U	ug/L	P401726	
		Glufosinate	0.10	U	ug/L	P401726	
		Glyphosate	0.10	U	ug/L	P401726	
		Afidopyropen	0.0020	U	ug/L	P401918	
		Bentazon	8.0E-04	U	ug/L	P401918	
		Sucralose	0.010	U	ug/L	P401726	
		Benzovindiflupyr	0.0020	U	ug/L	P401918	
		Carbamazepine	8.0E-04	U	ug/L	P401918	
		Clothianidin	0.0020	U	ug/L	P401918	
		Dinotefuran	0.0020	U	ug/L	P401918	
		Diuron	0.0020	U	ug/L	P401918	
		Fenuron	0.016	U	ug/L	P401918	
		Fluridone	8.0E-04	U	ug/L	P401918	
		Imazapyr	0.0040	U	ug/L	P401918	
		Hydrocodone	0.0020	U	ug/L	P401918	
		Ibuprofen	0.020	U	ug/L	P401918	
		Imidacloprid	0.0020	U	ug/L	P401918	
		Linuron	0.0040	U	ug/L	P401918	
		Mandestrobin	0.0020	U	ug/L	P401918	
		MCP	0.0020	U	ug/L	P401918	
		Naproxen	0.0080	U	ug/L	P401918	
		Primidone	0.0040	U	ug/L	P401918	
		Pyraclostrobin	0.0020	U	ug/L	P401918	
		Thiamethoxam	0.0020	U	ug/L	P401918	
		Tolfenpyrad	0.0020	U	ug/L	P401918	MS
		Triclopyr	0.0040	U	ug/L	P401918	
2266097	EPA 200.7 Rev. 4.4	Calcium	0.075	U	mg/L	P402037	

Field ID: FB_07292021

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2266097	EPA 200.7 Rev. 4.4	Iron	30	U	ug/L	P402037	
		Magnesium	0.040	U	mg/L	P402037	
		Manganese	1.0	U	ug/L	P402037	
		Zinc	5.0	U	ug/L	P402037	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P402037	
		Antimony	0.050	U	ug/L	P402037	
		Arsenic	0.050	U	ug/L	P402037	
		Beryllium	0.010	U	ug/L	P402037	
		Cadmium	0.020	U	ug/L	P402037	
		Chromium	0.40	U	ug/L	P402037	
		Copper	0.40	U	ug/L	P402037	
		Lead	0.20	U	ug/L	P402037	
		Nickel	0.50	U	ug/L	P402037	
		Selenium	0.20	U	ug/L	P402037	
		Silver	0.010	U	ug/L	P402037	
		Thallium	0.10	U	ug/L	P402037	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium and magnesium are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P401778

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P401881

Component	Result	Code	Units
Calcium	0.21	I	mg/L
Iron	30	U	ug/L
Magnesium	0.059	I	mg/L
Manganese	1.0	U	ug/L

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P402037

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Manganese	1.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P402375

Component	Result	Code	Units
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P401881

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	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: P402037

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	U	ug/L
Cadmium	0.020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P402037

Component	Result	Code	Units
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P402262

Component	Result	Code	Units
Copper	0.40	U	ug/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402257

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402268

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402527

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402635

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402781

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P401809

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: P401871

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P401840

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P401843

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P401768

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P401769

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

Reference Method: EPA 8321B
 Batch ID: P401726

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: EPA 8321B
 Batch ID: P401918

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P401918

Component	Result	Code	Units
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
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: SM 2320 B-2011

Batch ID: P401937

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

Reference Method: SM 2320 B-2011

Batch ID: P402115

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

Reference Method: SM 2540 D-2011

Batch ID: P402226

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011

Batch ID: P402228

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011

Batch ID: P401939

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011

Batch ID: P401941

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P402468

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: P401881

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	101		P	85 - 115
Iron	96.9		P	85 - 115
Magnesium	103		P	85 - 115
Manganese	98.1		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P402037

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	103		P	85 - 115
Iron	100		P	85 - 115
Magnesium	102		P	85 - 115
Manganese	94.8		P	85 - 115
Zinc	94.2		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P402375

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P401881

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	103		P	85 - 115
Antimony	107		P	85 - 115
Arsenic	102		P	85 - 115
Beryllium	103		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	100		P	85 - 115
Lead	105		P	85 - 115
Nickel	103		P	85 - 115
Selenium	99.0		P	85 - 115
Silver	102		P	85 - 115
Thallium	107		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P402037

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	98.9		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	96.0		P	85 - 115
Beryllium	94.2		P	85 - 115
Cadmium	98.2		P	85 - 115
Chromium	99.0		P	85 - 115
Copper	97.2		P	85 - 115
Lead	98.8		P	85 - 115
Nickel	98.1		P	85 - 115
Selenium	95.2		P	85 - 115
Silver	101		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P402037

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Thallium	99.8		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P402262

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Copper	93.0		P	85 - 115

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402257

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402268

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402527

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402635

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402781

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P401809

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P401871

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P401840

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P401843

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	109		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P401768

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P401769

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

Reference Method: EPA 8321B
Batch ID: P401726

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	79.4		P	40 - 150
AMPA	116		P	40 - 150
Endothall	83.5		P	40 - 150
Glufosinate	108		P	40 - 150
Glyphosate	107		P	40 - 150
Sucralose	93.2		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P401918

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	98.3		P	40 - 150
2,4,5-T	95.2		P	40 - 150
Acetaminophen	96.7		P	30 - 150
Acetamiprid	75.6		P	40 - 150
Afidopyropen	58.5		P	40 - 150
Bentazon	99.0		P	30 - 150
Benzovindiflupyr	85.7		P	40 - 150
Carbamazepine	78.9		P	40 - 150
Clothianidin	79.0		P	40 - 150
Dinotefuran	83.4		P	40 - 150
Diuron	81.0		P	40 - 150
Fenuron	86.8		P	40 - 150
Fluridone	89.8		P	40 - 150
Hydrocodone	84.7		P	40 - 150
Ibuprofen	79.6		P	40 - 150
Imazapyr	95.6		P	40 - 150
Imidacloprid	80.5		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P401918

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Linuron	80.3		P	40 - 150
Mandestrobin	88.2		P	40 - 150
MCPD	94.2		P	40 - 150
Naproxen	80.5		P	40 - 150
Primidone	79.4		P	40 - 150
Pyraclostrobin	83.4		P	40 - 150
Thiamethoxam	86.1		P	40 - 150
Tolfenpyrad	48.5		P	30 - 150
Triclopyr	96.0		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P401937

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	94 - 106

Reference Method: SM 2320 B-2011

Batch ID: P402115

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	94 - 106

Reference Method: SM 4500 F-C-2011

Batch ID: P401939

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	93 - 104

Reference Method: SM 4500 F-C-2011

Batch ID: P401941

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	93 - 104

Reference Method: SM 5310 B-2011

Batch ID: P402468

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P401881

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265970	Calcium	104		P	80 - 120
2265970	Iron	107		P	80 - 120
2265970	Magnesium	109		P	80 - 120
2265970	Manganese	105		P	80 - 120
2266597	Calcium	104		P	80 - 120
2266597	Iron	96.1	99.8	P/P	80 - 120
2266597	Magnesium	100	103	P/P	80 - 120
2266597	Manganese	100	99.7	P/P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P402037

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2267167	Iron	94.1	91.8	P/P	70 - 130
2267167	Manganese	90.6	89.9	P/P	70 - 130
2267167	Zinc	96.4	98.2	P/P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P402375

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265002	Zinc	108		P	80 - 120
2265969	Zinc	105	102	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P401881

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265970	Aluminum	118		P	80 - 120
2265970	Antimony	103		P	80 - 120
2265970	Arsenic	97.9		P	80 - 120
2265970	Beryllium	102		P	80 - 120
2265970	Cadmium	103		P	80 - 120
2265970	Chromium	102		P	80 - 120
2265970	Lead	100		P	80 - 120
2265970	Nickel	101		P	80 - 120
2265970	Selenium	95.3		P	80 - 120
2265970	Silver	103		P	80 - 120
2265970	Thallium	110		P	80 - 120
2266597	Aluminum	101	102	P/P	80 - 120
2266597	Antimony	104	106	P/P	80 - 120
2266597	Arsenic	97.3	98.3	P/P	80 - 120
2266597	Beryllium	98.5	98.3	P/P	80 - 120
2266597	Cadmium	100	102	P/P	80 - 120
2266597	Chromium	98.0	99.8	P/P	80 - 120
2266597	Lead	102	102	P/P	80 - 120
2266597	Nickel	97.8	99.3	P/P	80 - 120
2266597	Selenium	94.5	94.7	P/P	80 - 120
2266597	Silver	101	101	P/P	80 - 120
2266597	Thallium	108	108	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P402037

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2267167	Aluminum	105	107	P/P	70 - 130
2267167	Antimony	103	104	P/P	70 - 130
2267167	Arsenic	106	108	P/P	70 - 130
2267167	Beryllium	96.8	87.2	P/P	70 - 130
2267167	Cadmium	93.1	95.8	P/P	70 - 130
2267167	Chromium	99.7	101	P/P	70 - 130
2267167	Copper	102	104	P/P	70 - 130
2267167	Lead	110	111	P/P	70 - 130
2267167	Nickel	106	108	P/P	70 - 130
2267167	Selenium	94.5	93.8	P/P	70 - 130
2267167	Silver	91.2	92.8	P/P	70 - 130
2267167	Thallium	111	113	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P402262

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265003	Copper	91.6		P	80 - 120
2265339	Copper	111	94.2	P/P	80 - 120

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402257

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2266030	Ammonia-N	101	105	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402268

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2266963	Ammonia-N	101	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402781

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2266045	Kjeldahl Nitrogen	107	107	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P401809

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265948	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P401871

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2266045	NO2NO3-N	102	102	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P401840

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265980	Total-P	111	110	F/F	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P401768

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265949	O-Phosphate-P	96.0	97.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P401769

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2266333	O-Phosphate-P	92.3	92.1	P/P	90 - 110

Reference Method: EPA 8321B

Batch ID: P401726

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265882	Acesulfame K	136	135	P/P	40 - 150
2265882	AMPA	89.2	90.6	P/P	40 - 150
2265882	Endothall	98.2	98.8	P/P	40 - 150
2265882	Glufosinate	117	125	P/P	40 - 150
2265882	Glyphosate	99.3	103	P/P	40 - 150
2265882	Sucralose	94.1	95.3	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P401918

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265965	2,4-D	81.9	74.1	P/P	40 - 150
2265965	2,4,5-T	77.8	67.2	P/P	40 - 150
2265965	Acetaminophen	119	105	P/P	30 - 150
2265965	Acetamiprid	70.0	72.6	P/P	40 - 150
2265965	Afidopyropen	44.8	51.7	P/P	40 - 150
2265965	Bentazon	69.7	57.9	P/P	30 - 150
2265965	Benzovindiflupyr	61.3	49.5	P/P	40 - 150
2265965	Carbamazepine	77.4	78.6	P/P	40 - 150
2265965	Clothianidin	84.6	81.1	P/P	40 - 150
2265965	Dinotefuran	98.5	108	P/P	40 - 150
2265965	Diuron	69.6	61.7	P/P	40 - 150
2265965	Fenuron	84.8	85.8	P/P	40 - 150
2265965	Fluridone	71.8	62.4	P/P	40 - 150
2265965	Hydrocodone	92.2	102	P/P	40 - 150
2265965	Ibuprofen	58.0	48.3	P/P	40 - 150
2265965	Imazapyr	124	127	P/P	40 - 150
2265965	Imidacloprid	93.2	93.0	P/P	40 - 150
2265965	Linuron	63.0	52.0	P/P	40 - 150
2265965	Mandestrobin	70.0	59.3	P/P	40 - 150
2265965	MCP	82.0	70.1	P/P	40 - 150
2265965	Naproxen	62.2	55.7	P/P	40 - 150
2265965	Primidone	83.1	86.4	P/P	40 - 150
2265965	Pyraclostrobin	59.3	46.1	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P401918

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265965	Thiamethoxam	100	103	P/P	40 - 150
2265965	Tolfenpyrad	35.4	29.0	P/F	30 - 150
2265965	Triclopyr	78.7	67.7	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P401939

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2266207	Fluoride	99.2	101	P/P	92 - 107

Reference Method: SM 4500 F-C-2011
Batch ID: P401941

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265704	Fluoride	101	102	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P402468

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2266214	Organic Carbon	98.6	99.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P401778

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266041	Turbidity	6.65	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P401881

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266597	Calcium	0.583	Spike	P	0 - 20
2266597	Iron	3.11	Spike	P	0 - 20
2266597	Magnesium	2.06	Spike	P	0 - 20
2266597	Manganese	0.353	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P402037

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267167	Calcium	2.02	Spike	P	0 - 20
2267167	Iron	2.49	Spike	P	0 - 20
2267167	Magnesium	1.20	Spike	P	0 - 20
2267167	Manganese	0.783	Spike	P	0 - 20
2267167	Zinc	1.84	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P402375

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265969	Zinc	2.48	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P401881

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266597	Aluminum	1.19	Spike	P	0 - 20
2266597	Antimony	1.21	Spike	P	0 - 20
2266597	Arsenic	1.03	Spike	P	0 - 20
2266597	Beryllium	0.121	Spike	P	0 - 20
2266597	Cadmium	1.63	Spike	P	0 - 20
2266597	Chromium	1.78	Spike	P	0 - 20
2266597	Lead	0.0791	Spike	P	0 - 20
2266597	Nickel	1.56	Spike	P	0 - 20
2266597	Selenium	0.304	Spike	P	0 - 20
2266597	Silver	0.635	Spike	P	0 - 20
2266597	Thallium	0.523	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P402037

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267167	Aluminum	1.94	Spike	P	0 - 20
2267167	Antimony	0.938	Spike	P	0 - 20
2267167	Arsenic	1.45	Spike	P	0 - 20
2267167	Beryllium	10.4	Spike	P	0 - 20
2267167	Cadmium	2.81	Spike	P	0 - 20
2267167	Chromium	1.02	Spike	P	0 - 20
2267167	Copper	1.71	Spike	P	0 - 20
2267167	Lead	1.29	Spike	P	0 - 20
2267167	Nickel	1.43	Spike	P	0 - 20
2267167	Selenium	0.803	Spike	P	0 - 20
2267167	Silver	1.81	Spike	P	0 - 20
2267167	Thallium	2.04	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P402262

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265339	Copper	16.8	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402257

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266030	Ammonia-N	2.21	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402268

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266963	Ammonia-N	1.50	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402527

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266215	Kjeldahl Nitrogen	6.17	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402635

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265865	Kjeldahl Nitrogen	2.99	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P402781

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266045	Kjeldahl Nitrogen	0.311	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P401809

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265948	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P401871

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266045	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P401840

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265980	Total-P	0.611	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P401843

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266066	Total-P	2.96	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P401768

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265949	O-Phosphate-P	1.24	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P401769

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266333	O-Phosphate-P	0.205	Spike	P	0 - 20

Reference Method: EPA 8321B

Batch ID: P401726

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265882	Acesulfame K	0.980	Spike	P	0 - 30
2265882	AMPA	1.01	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P401726

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265882	Endothall	0.681	Spike	P	0 - 30
2265882	Glufosinate	6.72	Spike	P	0 - 30
2265882	Glyphosate	1.41	Spike	P	0 - 30
2265882	Sucralose	1.02	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P401918

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265965	2,4-D	8.53	Spike	P	0 - 30
2265965	2,4,5-T	14.6	Spike	P	0 - 30
2265965	Acetaminophen	12.4	Spike	P	0 - 30
2265965	Acetamiprid	3.65	Spike	P	0 - 30
2265965	Afidopyropen	14.2	Spike	P	0 - 30
2265965	Bentazon	10.6	Spike	P	0 - 30
2265965	Benzovindiflupyr	21.2	Spike	P	0 - 30
2265965	Carbamazepine	1.36	Spike	P	0 - 30
2265965	Clothianidin	4.27	Spike	P	0 - 30
2265965	Dinotefuran	9.20	Spike	P	0 - 30
2265965	Diuron	10.2	Spike	P	0 - 30
2265965	Fenuron	1.16	Spike	P	0 - 30
2265965	Fluridone	14.1	Spike	P	0 - 30
2265965	Hydrocodone	10.1	Spike	P	0 - 30
2265965	Ibuprofen	18.1	Spike	P	0 - 30
2265965	Imazapyr	2.32	Spike	P	0 - 30
2265965	Imidacloprid	0.285	Spike	P	0 - 30
2265965	Linuron	19.0	Spike	P	0 - 30
2265965	Mandestrobin	16.7	Spike	P	0 - 30
2265965	MCPP	15.0	Spike	P	0 - 30
2265965	Naproxen	11.0	Spike	P	0 - 30
2265965	Primidone	3.93	Spike	P	0 - 30
2265965	Pyraclostrobin	25.1	Spike	P	0 - 30
2265965	Thiamethoxam	2.50	Spike	P	0 - 30
2265965	Tolfenpyrad	20.1	Spike	P	0 - 30
2265965	Triclopyr	15.0	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P401937

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266207	Total Alkalinity	0.690	Sample	P	0 - 5.2

Reference Method: SM 2320 B-2011
Batch ID: P402115

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267182	Total Alkalinity	0.584	Sample	P	0 - 5.2

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-2011
Batch ID: P401939

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266207	Fluoride	0.897	Spike	P	0 - 2.1

Reference Method: SM 4500 F-C-2011
Batch ID: P401941

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265704	Fluoride	0.448	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P402468

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266214	Organic Carbon	0.218	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2266087
Field Sample ID: G3SD0070

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	123	P	30 - 160
EPA 8321B	Acetaminophen-d4	63.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	88.9	P	30 - 160
EPA 8321B	Diuron-d6	66.2	P	30 - 160
EPA 8321B	Endothall-d6	61.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	65.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	69.7	P	30 - 160
EPA 8321B	Primidone-d5	74.2	P	30 - 160
EPA 8321B	Sucralose-d6	112	P	30 - 160

Lab Sample ID: 2266088
Field Sample ID: FB_07292021

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	82.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	54.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	95.9	P	30 - 160
EPA 8321B	Diuron-d6	84.1	P	30 - 160
EPA 8321B	Endothall-d6	84.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	82.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	69.7	P	30 - 160
EPA 8321B	Primidone-d5	69.9	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A106947

Included Lab Sample IDs: 2266067, 2266070, 2266073

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.6	97.7	P/P	90 - 110
O-Phosphate-P	97.7	98.2	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A106950

Included Lab Sample IDs: 2266065, 2266068, 2266071

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A106974

Included Lab Sample IDs: 2266066, 2266072

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

Reference Method: EPA 8321B

Run ID: A106987

Included Lab Sample IDs: 2266087, 2266088

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	136	123	P/P	60 - 160
Glufosinate	101	103	P/P	60 - 160
Glyphosate	107	103	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A106997

Included Lab Sample IDs: 2266069

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A106998

Included Lab Sample IDs: 2266069

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	104	105	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A107001

Included Lab Sample IDs: 2266066

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	107	106	P/P	85 - 115

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A107002

Included Lab Sample IDs: 2266087, 2266088

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	115	124	P/P	60 - 160
Endothall	84.7	79.6	P/P	60 - 160
Sucralose	104	108	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A107005

Included Lab Sample IDs: 2266072

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.2	97.8	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A107027

Included Lab Sample IDs: 2266065, 2266071

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

Reference Method: SM 4500 F-C-2011

Run ID: A107027

Included Lab Sample IDs: 2266065, 2266068, 2266071

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	102	105	P/P	90 - 110
Fluoride	103	102	P/P	90 - 110
Fluoride	105	103	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A107048

Included Lab Sample IDs: 2266095

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	104	104	P/P	90 - 110
Antimony	105	106	P/P	90 - 110
Arsenic	102	102	P/P	90 - 110
Beryllium	99.0	101	P/P	90 - 110
Cadmium	104	104	P/P	90 - 110
Chromium	100	100	P/P	90 - 110
Nickel	101	100	P/P	90 - 110
Selenium	101	101	P/P	90 - 110
Silver	96.8	97.0	P/P	90 - 110
Thallium	109	108	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A107070

Included Lab Sample IDs: 2266095

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Lead	99.8	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-2011

Run ID: A107093

Included Lab Sample IDs: 2266068

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A107105

Included Lab Sample IDs: 2266096, 2266097

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	102	99.7	P/P	90 - 110
Aluminum	99.7	102	P/P	90 - 110
Antimony	100	99.9	P/P	90 - 110
Antimony	100	100	P/P	90 - 110
Arsenic	101	99.0	P/P	90 - 110
Arsenic	99.0	99.9	P/P	90 - 110
Beryllium	96.5	97.1	P/P	90 - 110
Beryllium	98.8	96.5	P/P	90 - 110
Cadmium	98.6	98.9	P/P	90 - 110
Cadmium	98.9	98.9	P/P	90 - 110
Chromium	97.7	97.6	P/P	90 - 110
Chromium	99.5	97.7	P/P	90 - 110
Copper	97.8	98.8	P/P	90 - 110
Copper	99.4	97.8	P/P	90 - 110
Lead	99.5	98.9	P/P	90 - 110
Lead	99.5	99.5	P/P	90 - 110
Nickel	101	98.3	P/P	90 - 110
Nickel	98.3	100	P/P	90 - 110
Selenium	97.5	97.8	P/P	90 - 110
Selenium	97.8	98.1	P/P	90 - 110
Silver	95.6	96.1	P/P	90 - 110
Silver	96.1	95.5	P/P	90 - 110
Thallium	101	101	P/P	90 - 110
Thallium	101	100	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A107122

Included Lab Sample IDs: 2266087, 2266088

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	97.3	97.8	P/P	50 - 150
2,4,5-T	102	98.4	P/P	50 - 150
Acetaminophen	111	108	P/P	60 - 160
Acetamiprid	109	109	P/P	50 - 150
Afidopyropen	112	112	P/P	50 - 150
Bentazon	126	124	P/P	50 - 160
Benzovindiflupyr	117	119	P/P	50 - 150
Carbamazepine	112	108	P/P	60 - 150
Clothianidin	97.7	92.9	P/P	60 - 150
Dinotefuran	111	113	P/P	50 - 150
Diuron	118	116	P/P	60 - 160
Fenuron	108	108	P/P	60 - 150
Fluridone	123	123	P/P	60 - 160
Hydrocodone	112	113	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A107122

Included Lab Sample IDs: 2266087, 2266088

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ibuprofen	106	108	P/P	50 - 160
Imazapyr	114	117	P/P	50 - 150
Imidacloprid	100	99.8	P/P	60 - 150
Linuron	107	105	P/P	60 - 150
Mandestrobin	122	122	P/P	50 - 150
MCPP	94.1	92.4	P/P	50 - 150
Naproxen	86.8	87.4	P/P	50 - 160
Primidone	96.1	93.8	P/P	60 - 150
Pyraclostrobin	118	119	P/P	60 - 150
Thiamethoxam	113	115	P/P	50 - 150
Tolfenpyrad	107	105	P/P	60 - 150
Triclopyr	100	98.6	P/P	50 - 150

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A107127

Included Lab Sample IDs: 2266095, 2266096, 2266097

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	100	95.3	P/P	95 - 105
Calcium	98.9	100	P/P	90 - 110
Iron	101	96.0	P/P	95 - 105
Iron	94.5	95.9	P/P	90 - 110
Magnesium	100	94.8	P/P	95 - 105
Magnesium	95.9	97.1	P/P	90 - 110
Manganese	100	103	P/P	90 - 110
Manganese	99.4	96.3	P/P	95 - 105
Zinc	98.9	92.7	P/P	95 - 105

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A107151

Included Lab Sample IDs: 2266066, 2266072

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	98.1	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A107154

Included Lab Sample IDs: 2266069

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.9	99.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A107192

Included Lab Sample IDs: 2266095

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	92.8	93.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A107246

Included Lab Sample IDs: 2266066, 2266069, 2266072

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.0	97.6	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A107254

Included Lab Sample IDs: 2266095

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Zinc	99.4	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A107303

Included Lab Sample IDs: 2266072

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A107354

Included Lab Sample IDs: 2266066

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A107391

Included Lab Sample IDs: 2266069

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	102	P/P	90 - 110

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						6.65	
EPA 200.7 Rev. 4.4	Calcium	101	104	104				0.583
	Calcium	103						2.02
	Iron	96.9	107	96.1	99.8			3.11
	Iron	100	94.1	91.8				2.49
	Magnesium	103	109	100	103			2.06
	Magnesium	102						1.20
	Manganese	98.1	105	100	99.7			0.353
	Manganese	94.8	90.6	89.9				0.783
	Zinc	94.2	96.4	98.2				1.84
	Zinc	108	108	105	102			2.48
EPA 200.8 Rev. 5.4	Aluminum	103	101	102	118			1.19
	Aluminum	98.9	105	107				1.94
	Antimony	107	104	106	103			1.21
	Antimony	102	103	104				0.938
	Arsenic	102	97.3	98.3	97.9			1.03
	Arsenic	96.0	106	108				1.45
	Beryllium	103	98.5	98.3	102			0.121
	Beryllium	94.2	96.8	87.2				10.4
	Cadmium	103	100	102	103			1.63
	Cadmium	98.2	93.1	95.8				2.81
	Chromium	100	98.0	99.8	102			1.78
	Chromium	99.0	99.7	101				1.02
	Copper	97.2	102	104				1.71
	Copper	93.0	111	94.2	91.6			16.8
	Lead	105	102	102	100			0.0791
	Lead	98.8	110	111				1.29
	Nickel	103	97.8	99.3	101			1.56
	Nickel	98.1	106	108				1.43
	Selenium	99.0	94.5	94.7	95.3			0.304
	Selenium	95.2	94.5	93.8				0.803
	Silver	102	101	101	103			0.635
	Silver	101	91.2	92.8				1.81
	Thallium	107	108	108	110			0.523
	Thallium	99.8	111	113				2.04
EPA 350.1 Rev. 2.0	Ammonia-N	100	101	105				2.21
	Ammonia-N	100	101	103				1.50
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100						6.17
	Kjeldahl Nitrogen	106						2.99
	Kjeldahl Nitrogen	109	107	107				0.311
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	100	100				0.0
	NO2NO3-N	101	102	102				0.0
EPA 365.1 Rev. 2.0	Total-P	107	111	110				0.611
	Total-P	109						2.96
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.1	96.0	97.2				1.24
	O-Phosphate-P	99.6	92.3	92.1				0.205
EPA 8321B	2,4-D	98.3	81.9	74.1				8.53
	2,4,5-T	95.2	77.8	67.2				14.6
	Acesulfame K	79.4	136	135				0.980
	Acetaminophen	96.7	119	105				12.4
	Acetamiprid	75.6	70.0	72.6				3.65
	Afidopyropen	58.5	44.8	51.7				14.2
	AMPA	116	89.2	90.6				1.01
	Bentazon	99.0	69.7	57.9				10.6

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Benzovindiflupyr	85.7	61.3	49.5		21.2
	Carbamazepine	78.9	77.4	78.6		1.36
	Clothianidin	79.0	84.6	81.1		4.27
	Dinotefuran	83.4	98.5	108		9.20
	Diuron	81.0	69.6	61.7		10.2
	Endothall	83.5	98.2	98.8		0.681
	Fenuron	86.8	84.8	85.8		1.16
	Fluridone	89.8	71.8	62.4		14.1
	Glufosinate	108	117	125		6.72
	Glyphosate	107	99.3	103		1.41
	Hydrocodone	84.7	92.2	102		10.1
	Ibuprofen	79.6	58.0	48.3		18.1
	Imazapyr	95.6	124	127		2.32
	Imidacloprid	80.5	93.2	93.0		0.285
	Linuron	80.3	63.0	52.0		19.0
	Mandestrobin	88.2	70.0	59.3		16.7
	MCPP	94.2	82.0	70.1		15.0
	Naproxen	80.5	62.2	55.7		11.0
	Primidone	79.4	83.1	86.4		3.93
	Pyraclostrobin	83.4	59.3	46.1		25.1
	Sucralose	93.2	94.1	95.3		1.02
	Thiamethoxam	86.1	100	103		2.50
	Tolfenpyrad	48.5	35.4	29.0		20.1
	Triclopyr	96.0	78.7	67.7		15.0
SM 2320 B-2011	Total Alkalinity	102			0.690	
	Total Alkalinity	100			0.584	
SM 4500 F-C-2011	Fluoride	101	99.2	101		0.897
	Fluoride	102	101	102		0.448
SM 5310 B-2011	Organic Carbon	97.6	98.6	99.0		0.218

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2266065, 2266068, 2266071
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2266095, 2266096, 2266097
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2266095, 2266096, 2266097
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2266066, 2266069, 2266072
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2266066, 2266069, 2266072
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2266066, 2266069, 2266072
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2266066, 2266069, 2266072
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2266067, 2266070, 2266073
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2266087, 2266088
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2266065, 2266068, 2266071
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2266065, 2266068, 2266071
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2266065, 2266068, 2266071
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2266066, 2266069, 2266072

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	07/30/2021			07/30/2021 15:49	Sarah A Nixon	2266065, 2266068, 2266071
EPA 200.7 Rev. 4.4	07/30/2021	08/03/2021 13:50	Elliott D. Healy	08/09/2021 21:04	Josef B Mick	2266095
	07/30/2021	08/05/2021 12:15	Elliott D. Healy	08/09/2021 11:28	Josef B Mick	2266097
	07/30/2021	08/05/2021 12:15	Elliott D. Healy	08/09/2021 12:04	Josef B Mick	2266096
	07/30/2021	08/12/2021 14:40	Elliott D. Healy	08/13/2021 23:44	Josef B Mick	2266095
EPA 200.8 Rev. 5.4	07/30/2021	08/03/2021 13:50	Elliott D. Healy	08/05/2021 04:37	Alexander Thompson	2266095
	07/30/2021	08/03/2021 13:50	Elliott D. Healy	08/05/2021 21:01	Alexander Thompson	2266095
	07/30/2021	08/05/2021 12:15	Elliott D. Healy	08/06/2021 18:18	Alexander Thompson	2266097
	07/30/2021	08/05/2021 12:15	Elliott D. Healy	08/06/2021 20:52	Alexander Thompson	2266096
	07/30/2021	08/10/2021 16:20	Elliott D. Healy	08/11/2021 17:56	Alexander Thompson	2266095
EPA 350.1 Rev. 2.0	07/30/2021			08/10/2021 12:17	Roberta Tatti	2266066
	07/30/2021			08/10/2021 12:22	Roberta Tatti	2266072
	07/30/2021			08/10/2021 14:23	Roberta Tatti	2266069
EPA 351.2 Rev. 2.0	07/30/2021	08/16/2021 18:04	Madeline Gruver	08/17/2021 14:28	Virginia P. Brown	2266072
	07/30/2021	08/18/2021 14:21	Benjamin T. Nordmann	08/19/2021 12:09	Virginia P. Brown	2266066
	07/30/2021	08/20/2021 15:23	Benjamin T. Nordmann	08/23/2021 10:00	Virginia P. Brown	2266069
EPA 353.2 Rev. 2.0	07/30/2021			08/02/2021 09:29	Beverly Y. Sanders	2266066
	07/30/2021			08/02/2021 09:30	Beverly Y. Sanders	2266072
	07/30/2021			08/03/2021 11:30	Beverly Y. Sanders	2266069
EPA 365.1 Rev. 2.0	07/30/2021	08/02/2021 17:13	Simonne.V. Calhoun	08/03/2021 11:00	Lipi Saha	2266069
	07/30/2021	08/02/2021 17:13	Simonne.V. Calhoun	08/03/2021 13:59	Lipi Saha	2266066
	07/30/2021	08/02/2021 17:13	Simonne.V. Calhoun	08/03/2021 14:20	Lipi Saha	2266072
EPA 365.1 Rev. 2.0 dissolved	07/30/2021			07/30/2021 15:13	Ping Hua	2266067
	07/30/2021			07/30/2021 15:15	Ping Hua	2266073
	07/30/2021			07/30/2021 15:25	Ping Hua	2266070
EPA 8321B	07/30/2021	08/02/2021 09:00	Pramila Ghimire	08/02/2021 13:01	Juyoung Kim	2266087
	07/30/2021	08/02/2021 09:00	Pramila Ghimire	08/02/2021 13:12	Juyoung Kim	2266088
	07/30/2021	08/02/2021 09:00	Pramila Ghimire	08/03/2021 12:17	Pramila Ghimire	2266087
	07/30/2021	08/02/2021 09:00	Pramila Ghimire	08/03/2021 12:31	Pramila Ghimire	2266088
	07/30/2021	08/04/2021 14:00	Hoor Shaik	08/07/2021 00:05	Juyoung Kim	2266087
	07/30/2021	08/04/2021 14:00	Hoor Shaik	08/07/2021 00:40	Juyoung Kim	2266088
SM 2320 B-2011	07/30/2021			08/03/2021 16:55	Dale L. Simmons	2266071
	07/30/2021			08/03/2021 19:55	Dale L. Simmons	2266065
	07/30/2021			08/05/2021 20:09	Dale L. Simmons	2266068
SM 2540 D-2011	07/30/2021			08/03/2021 14:36	Yijie Li	2266065, 2266068, 2266071
SM 4500 F-C-2011	07/30/2021			08/03/2021 16:55	Dale L. Simmons	2266071
	07/30/2021			08/03/2021 19:55	Dale L. Simmons	2266065
	07/30/2021			08/03/2021 22:01	Dale L. Simmons	2266068
SM 5310 B-2011	07/30/2021			08/12/2021 06:07	Madeline Gruver	2266066
	07/30/2021			08/12/2021 06:20	Madeline Gruver	2266069

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-2011	07/30/2021			08/12/2021 06:33	Madeline Gruver	2266072