

Chemical Analysis Report

NW-DIST-2022-08-17-03

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

Event Description: **Milton North Run**
Request ID: **RQ-2022-08-15-30**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 W Government Street
Suite 208
Pensacola, FL 32502-5794
Attn: Myranda Butler

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

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

Date Certified: 08-SEP-2022 13:40



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: Jacobs Creek Upstream of Bagwell Rd

Collection Date/Time: 08/16/2022 11:25

Field ID: G4NW0003

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2350040	EPA 8321B	2,4-D	0.0020	U	ug/L	P418371	
		Acesulfame K	0.10	U	ug/L	P418300	
		2,4,5-T	0.0040	U	ug/L	P418371	
		AMPA	0.10	U	ug/L	P418300	
		Acetaminophen	0.0080	U	ug/L	P418371	
		Acetamiprid	0.0020	U	ug/L	P418371	
		Endothall	0.25	U	ug/L	P418300	
		Glufosinate	0.10	U	ug/L	P418300	
		Glyphosate	0.10	U	ug/L	P418300	
		Afidopyropen	0.0020	U	ug/L	P418371	
		Bentazon	8.0E-04	U	ug/L	P418371	
		Sucralose	0.58		ug/L	P418300	
		Benzovindiflupyr	0.0020	U	ug/L	P418371	
		Carbamazepine	8.0E-04	U	ug/L	P418371	
		Clothianidin	0.0020	U	ug/L	P418371	
		Dinotefuran	0.0020	U	ug/L	P418371	
		Diuron	0.0020	U	ug/L	P418371	
		Fenuron	0.032	U	ug/L	P418371	
		Fluridone	8.0E-04	U	ug/L	P418371	
		Imazapyr	0.0040	U	ug/L	P418371	
		Hydrocodone	0.0020	U	ug/L	P418371	
		Ibuprofen	0.080	U	ug/L	P418371	
		Imidacloprid	0.0095		ug/L	P418371	
		Linuron	0.0040	U	ug/L	P418371	
		Mandestrobin	0.0020	U	ug/L	P418371	
		MCPP	0.0040	U	ug/L	P418371	
		Naproxen	0.0080	U	ug/L	P418371	
		Primidone	0.0040	U	ug/L	P418371	
		Pyraclostrobin	0.0020	U	ug/L	P418371	
		Silvex	0.0040	U	ug/L	P418371	
		Thiamethoxam	0.0020	U	ug/L	P418371	
		Tolfenpyrad	0.0020	U	ug/L	P418371	
		Triclopyr	0.0040	U	ug/L	P418371	
2350044	EPA 200.7 Rev. 4.4	Calcium	1.53		mg/L	P418293	
		Iron	520		ug/L	P418293	
		Magnesium	0.99		mg/L	P418293	
		Potassium	0.65	I	mg/L	P418293	
		Sodium	2.9		mg/L	P418293	
		Strontium	10.1		ug/L	P418293	
		Tin	3.0	U	ug/L	P418293	
		Titanium	0.75	U	ug/L	P418293	
		Vanadium	2.0	U	ug/L	P418293	
		Zinc	5.0	U	ug/L	P418293	
	EPA 200.8 Rev. 5.4	Aluminum	46		ug/L	P418293	

Field ID: G4NW0003

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2350044	EPA 200.8 Rev. 5.4	Antimony	0.050	U	ug/L	P418293	
		Arsenic	0.35		ug/L	P418293	
		Barium	24.9		ug/L	P418293	
		Beryllium	0.022	I	ug/L	P418293	
		Boron	14.7		ug/L	P418293	
		Cadmium	0.020	U	ug/L	P418293	
		Chromium	0.40	U	ug/L	P418293	
		Cobalt	0.320		ug/L	P418293	
		Copper	0.40	U	ug/L	P418293	
		Lead	0.20	U	ug/L	P418293	
		Manganese	44.7		ug/L	P418293	
		Molybdenum	0.15	U	ug/L	P418293	
		Nickel	0.50	U	ug/L	P418293	
		Selenium	0.20	U	ug/L	P418293	
		Silver	0.010	U	ug/L	P418293	
	SM 2340 B-2011	Thallium	0.10	U	ug/L	P418293	
		Hardness	7.9		mg/L	P418293	

Ref. Method and Comment:

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: Pace Mill Creek upstream of Hwy 90

Collection Date/Time: 08/16/2022 11:00

Field ID: G4NW0481

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2350041	EPA 8321B	2,4-D	0.0084		ug/L	P418371	
		Acesulfame K	0.10	U	ug/L	P418300	
		2,4,5-T	0.0040	U	ug/L	P418371	
		AMPA	0.10	U	ug/L	P418300	
		Acetaminophen	0.0080	U	ug/L	P418371	
		Acetamiprid	0.0020	U	ug/L	P418371	
		Endothall	0.25	U	ug/L	P418300	
		Glufosinate	0.10	U	ug/L	P418300	
		Glyphosate	0.10	U	ug/L	P418300	
		Afidopyropen	0.0020	U	ug/L	P418371	
		Bentazon	8.0E-04	U	ug/L	P418371	
		Sucralose	1.2		ug/L	P418300	
		Benzovindiflupyr	0.0020	U	ug/L	P418371	
		Carbamazepine	0.0021	I	ug/L	P418371	
		Clothianidin	0.0020	U	ug/L	P418371	
		Dinotefuran	0.0020	U	ug/L	P418371	
		Diuron	0.0028	I	ug/L	P418371	
		Fenuron	0.032	U	ug/L	P418371	
		Fluridone	8.0E-04	U	ug/L	P418371	
		Imazapyr	0.0040	U	ug/L	P418371	
		Hydrocodone	0.0020	U	ug/L	P418371	
		Ibuprofen	0.080	U	ug/L	P418371	
		Imidacloprid	0.012		ug/L	P418371	
		Linuron	0.0040	U	ug/L	P418371	
		Mandestrobin	0.0020	U	ug/L	P418371	
		MCPP	0.0040	U	ug/L	P418371	
		Naproxen	0.0080	U	ug/L	P418371	
		Primidone	0.0040	U	ug/L	P418371	
		Pyraclostrobin	0.0020	U	ug/L	P418371	
		Silvex	0.0040	U	ug/L	P418371	
		Thiamethoxam	0.0020	U	ug/L	P418371	
		Tolfenpyrad	0.0020	U	ug/L	P418371	
		Triclopyr	0.0040	U	ug/L	P418371	
2350045	EPA 200.7 Rev. 4.4	Calcium	3.57		mg/L	P418293	
		Iron	890		ug/L	P418293	
		Magnesium	1.26		mg/L	P418293	
		Potassium	0.68	I	mg/L	P418293	
		Sodium	4.1		mg/L	P418293	
		Strontium	17.2		ug/L	P418293	
		Tin	3.0	U	ug/L	P418293	
		Titanium	0.75	U	ug/L	P418293	
		Vanadium	2.0	U	ug/L	P418293	
		Zinc	5.0	U	ug/L	P418293	
	EPA 200.8 Rev. 5.4	Aluminum	49		ug/L	P418293	

Field ID: G4NW0481

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2350045	EPA 200.8 Rev. 5.4	Antimony	0.050	U	ug/L	P418293	
		Arsenic	0.45		ug/L	P418293	
		Barium	23.6		ug/L	P418293	
		Beryllium	0.017	I	ug/L	P418293	
		Boron	19.0		ug/L	P418293	
		Cadmium	0.020	U	ug/L	P418293	
		Chromium	0.40	U	ug/L	P418293	
		Cobalt	0.157		ug/L	P418293	
		Copper	0.40	U	ug/L	P418293	
		Lead	0.20	U	ug/L	P418293	
		Manganese	30.4		ug/L	P418293	
		Molybdenum	0.15	U	ug/L	P418293	
		Nickel	0.50	U	ug/L	P418293	
		Selenium	0.20	U	ug/L	P418293	
		Silver	0.010	U	ug/L	P418293	
		Thallium	0.10	U	ug/L	P418293	
	SM 2340 B-2011	Hardness	14.1		mg/L	P418293	

Ref. Method and Comment:

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: Collins Mill Creek upstream of Conecuh Street Collection Date/Time: 08/16/2022 10:15

Field ID: G4NW0507

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2350028	DEP SOP: NU-094-1	Color (true)	14	A	PCU	P418272	
	EPA 180.1 Rev. 2.0	Turbidity	2.0	A	NTU	P418266	
	EPA 300.0 Rev. 2.1	Chloride	5.3		mg Cl/L	P418867	
		Sulfate	4.1		mg SO4/L	P418870	
	SM 2320 B-2011	Total Alkalinity	13		mg CaCO3/L	P418391	
	SM 2540 C-2011	TDS	41		mg/L	P418646	
	SM 2540 D-2011	TSS	2	I	mg/L	P418606	
	SM 4500-F- C-2011	Fluoride	0.035	U	mg F/L	P418401	
2350029	EPA 350.1 Rev. 2.0	Ammonia-N	0.050		mg N/L	P418492	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.18	I	mg N/L	P418448	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.18		mg N/L	P418528	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P418369	
	SM 5310 B-2011	Organic Carbon	2.3		mg C/L	P418470	

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.

Sample Location: FB

Collection Date/Time: 08/16/2022 10:20

Field ID: FB_08162022

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2350030	DEP SOP: NU-094-1	Color (true)	2.5	U	PCU	P418272	
	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P418266	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P418867	
		Sulfate	0.20	U	mg SO4/L	P418870	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P418391	
	SM 2540 C-2011	TDS	15	U	mg/L	P418646	
	SM 2540 D-2011	TSS	2	U	mg/L	P418606	
2350031	SM 4500-F- C-2011	Fluoride	0.035	U	mg F/L	P418401	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P418492	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P418448	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P418528	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P418369	
2350043	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P418470	
	EPA 8321B	2,4-D	0.0020	U	ug/L	P418371	
		Acesulfame K	0.10	U	ug/L	P418300	
		2,4,5-T	0.0040	U	ug/L	P418371	
		AMPA	0.10	U	ug/L	P418300	
		Acetaminophen	0.0080	U	ug/L	P418371	
		Acetamiprid	0.0020	U	ug/L	P418371	
		Endothall	0.25	U	ug/L	P418300	
		Glufosinate	0.10	U	ug/L	P418300	
		Glyphosate	0.10	U	ug/L	P418300	
		Afidopyropen	0.0020	U	ug/L	P418371	
		Bentazon	8.0E-04	U	ug/L	P418371	
		Sucralose	0.010	U	ug/L	P418300	
		Benzovindiflupyr	0.0020	U	ug/L	P418371	
		Carbamazepine	8.0E-04	U	ug/L	P418371	
		Clothianidin	0.0020	U	ug/L	P418371	
		Dinotefuran	0.0020	U	ug/L	P418371	
		Diuron	0.0020	U	ug/L	P418371	
		Fenuron	0.032	U	ug/L	P418371	
		Fluridone	8.0E-04	U	ug/L	P418371	
		Imazapyr	0.0040	U	ug/L	P418371	
		Hydrocodone	0.0020	U	ug/L	P418371	
		Ibuprofen	0.080	U	ug/L	P418371	
		Imidacloprid	0.0020	U	ug/L	P418371	
		Linuron	0.0040	U	ug/L	P418371	
		Mandestrobin	0.0020	U	ug/L	P418371	
		MCPP	0.0040	U	ug/L	P418371	
		Naproxen	0.0080	U	ug/L	P418371	
		Primidone	0.0040	U	ug/L	P418371	
		Pyraclostrobin	0.0020	U	ug/L	P418371	
		Silvex	0.0040	U	ug/L	P418371	
		Thiamethoxam	0.0020	U	ug/L	P418371	

Field ID: FB_08162022

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2350043	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P418371	
		Triclopyr	0.0040	U	ug/L	P418371	
2350047	EPA 200.7 Rev. 4.4	Calcium	0.075	U	mg/L	P418293	
		Iron	30	U	ug/L	P418293	
		Magnesium	0.040	U	mg/L	P418293	
		Potassium	0.30	U	mg/L	P418293	
		Sodium	0.50	U	mg/L	P418293	
		Strontium	2.0	U	ug/L	P418293	
		Tin	3.0	U	ug/L	P418293	
		Titanium	0.75	U	ug/L	P418293	
		Vanadium	2.0	U	ug/L	P418293	
		Zinc	5.0	U	ug/L	P418293	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P418293	
		Antimony	0.050	U	ug/L	P418293	
		Arsenic	0.050	U	ug/L	P418293	
		Barium	0.20	U	ug/L	P418293	
		Beryllium	0.010	U	ug/L	P418293	
		Boron	2.0	U	ug/L	P418293	
		Cadmium	0.020	U	ug/L	P418293	
		Chromium	0.40	U	ug/L	P418293	
		Cobalt	0.020	U	ug/L	P418293	
		Copper	0.40	U	ug/L	P418293	
		Lead	0.20	U	ug/L	P418293	
		Manganese	0.10	U	ug/L	P418293	
		Molybdenum	0.15	U	ug/L	P418293	
		Nickel	0.50	U	ug/L	P418293	
		Selenium	0.20	U	ug/L	P418293	
		Silver	0.010	U	ug/L	P418293	
		Thallium	0.10	U	ug/L	P418293	

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 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: Pace Mill Creek end of Rodella St

Collection Date/Time: 08/16/2022 12:00

Field ID: G4NW0146

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2350042	EPA 8321B	2,4-D	0.0020	U	ug/L	P418371	
		Acesulfame K	0.10	U	ug/L	P418300	
		2,4,5-T	0.0040	U	ug/L	P418371	
		AMPA	0.10	U	ug/L	P418300	
		Acetaminophen	0.0080	U	ug/L	P418371	
		Acetamiprid	0.0020	U	ug/L	P418371	
		Endothall	0.25	U	ug/L	P418300	
		Glufosinate	0.10	U	ug/L	P418300	
		Glyphosate	0.10	U	ug/L	P418300	
		Afidopyropen	0.0020	U	ug/L	P418371	
		Bentazon	8.0E-04	U	ug/L	P418371	
		Sucralose	0.63		ug/L	P418300	
		Benzovindiflupyr	0.0020	U	ug/L	P418371	
		Carbamazepine	8.0E-04	U	ug/L	P418371	
		Clothianidin	0.0020	U	ug/L	P418371	
		Dinotefuran	0.0020	U	ug/L	P418371	
		Diuron	0.0068	I	ug/L	P418371	
		Fenuron	0.032	U	ug/L	P418371	
		Fluridone	8.0E-04	U	ug/L	P418371	
		Imazapyr	0.0040	U	ug/L	P418371	
		Hydrocodone	0.0020	U	ug/L	P418371	
		Ibuprofen	0.080	U	ug/L	P418371	
		Imidacloprid	0.0058	I	ug/L	P418371	
		Linuron	0.0040	U	ug/L	P418371	
		Mandestrobin	0.0020	U	ug/L	P418371	
		MCPP	0.0040	U	ug/L	P418371	
		Naproxen	0.0080	U	ug/L	P418371	
		Primidone	0.0040	U	ug/L	P418371	
		Pyraclostrobin	0.0020	U	ug/L	P418371	
		Silvex	0.0040	U	ug/L	P418371	
		Thiamethoxam	0.0020	U	ug/L	P418371	
		Tolfenpyrad	0.0020	U	ug/L	P418371	
		Triclopyr	0.0040	U	ug/L	P418371	
2350046	EPA 200.7 Rev. 4.4	Calcium	3.33		mg/L	P418293	
		Iron	1340		ug/L	P418293	
		Magnesium	1.17		mg/L	P418293	
		Potassium	0.56	I	mg/L	P418293	
		Sodium	4.2		mg/L	P418293	
		Strontium	13.5		ug/L	P418293	
		Tin	3.0	U	ug/L	P418293	
		Titanium	0.75	U	ug/L	P418293	
		Vanadium	2.0	U	ug/L	P418293	
		Zinc	5.0	U	ug/L	P418293	
	EPA 200.8 Rev. 5.4	Aluminum	73		ug/L	P418293	

Field ID: G4NW0146

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2350046	EPA 200.8 Rev. 5.4	Antimony	0.059	I	ug/L	P418293	
		Arsenic	0.69		ug/L	P418293	
		Barium	14.8		ug/L	P418293	
		Beryllium	0.010	U	ug/L	P418293	
		Boron	15.9		ug/L	P418293	
		Cadmium	0.020	U	ug/L	P418293	
		Chromium	0.40	U	ug/L	P418293	
		Cobalt	0.140		ug/L	P418293	
		Copper	0.40	U	ug/L	P418293	
		Lead	0.22	I	ug/L	P418293	
		Manganese	43.0		ug/L	P418293	
		Molybdenum	0.15	U	ug/L	P418293	
		Nickel	0.50	U	ug/L	P418293	
		Selenium	0.20	U	ug/L	P418293	
		Silver	0.010	U	ug/L	P418293	
	SM 2340 B-2011	Thallium	0.10	U	ug/L	P418293	
		Hardness	13.1		mg/L	P418293	

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P418272

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P418266

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P418293

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Strontium	2.0	U	ug/L
Tin	3.0	U	ug/L
Titanium	0.75	U	ug/L
Vanadium	2.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P418293

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Barium	0.20	U	ug/L
Beryllium	0.010	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Cobalt	0.020	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.10	U	ug/L
Molybdenum	0.15	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P418867

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P418870

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P418492

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418448

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P418528

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P418369

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

Reference Method: EPA 8321B
Batch ID: P418300

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: P418371

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: P418371

Component	Result	Code	Units
Fenuron	0.032	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.080	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0040	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	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: P418391

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

Reference Method: SM 2540 C-2011
Batch ID: P418646

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P418606

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P418401

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P418470

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: DEP SOP: NU-094-1
Batch ID: P418272

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.6		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P418266

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P418293

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	99.2		P	80 - 120
Iron	98.7		P	80 - 120
Magnesium	99.2		P	80 - 120
Potassium	104		P	80 - 120
Sodium	104		P	80 - 120
Strontium	101		P	80 - 120
Tin	97.2		P	80 - 120
Titanium	98.4		P	80 - 120
Vanadium	98.4		P	80 - 120
Zinc	97.7		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P418293

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	103		P	85 - 115
Antimony	99.2		P	85 - 115
Arsenic	101		P	85 - 115
Barium	104		P	85 - 115
Beryllium	94.9		P	85 - 115
Boron	99.9		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	102		P	85 - 115
Cobalt	96.9		P	85 - 115
Copper	98.3		P	85 - 115
Lead	96.5		P	85 - 115
Manganese	101		P	85 - 115
Molybdenum	99.4		P	85 - 115
Nickel	99.4		P	85 - 115
Selenium	101		P	85 - 115
Silver	102		P	85 - 115
Thallium	97.0		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P418867

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.0		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P418870

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P418492

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: P418448

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P418528

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	98.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P418369

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

Reference Method: EPA 8321B
Batch ID: P418300

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	93.5		P	40 - 150
AMPA	111		P	40 - 150
Endothall	108		P	40 - 150
Glufosinate	117		P	40 - 150
Glyphosate	109		P	40 - 150
Sucralose	107		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P418371

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	66.7		P	40 - 150
2,4,5-T	72.5		P	40 - 150
Acetaminophen	88.1		P	30 - 150
Acetamiprid	80.9		P	40 - 150
Afidopyropen	89.0		P	30 - 150
Bentazon	114		P	30 - 150
Benzovindiflupyr	98.5		P	40 - 150
Carbamazepine	117		P	40 - 150
Clothianidin	100		P	40 - 150
Dinotefuran	108		P	40 - 150
Diuron	86.2		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P418371

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fenuron	113		P	40 - 150
Fluridone	90.2		P	40 - 150
Hydrocodone	99.0		P	40 - 150
Ibuprofen	81.9		P	40 - 150
Imazapyr	86.3		P	40 - 150
Imidacloprid	93.3		P	40 - 150
Linuron	101		P	40 - 150
Mandestrobin	101		P	40 - 150
MCPP	85.7		P	40 - 150
Naproxen	148		P	40 - 150
Primidone	89.4		P	40 - 150
Pyraclostrobin	88.9		P	40 - 150
Silvex	66.8		P	40 - 150
Thiamethoxam	101		P	40 - 150
Tolfenpyrad	40.5		P	30 - 150
Triclopyr	68.9		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P418391

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.9		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P418401

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P418470

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P418293

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2350007	Iron	96.8		P	80 - 120
2350007	Magnesium	99.9		P	80 - 120
2350007	Potassium	104		P	80 - 120
2350007	Sodium	104		P	80 - 120
2350007	Strontium	99.3		P	80 - 120
2350007	Tin	93.7		P	80 - 120
2350007	Titanium	96.3		P	80 - 120
2350007	Vanadium	97.5		P	80 - 120
2350007	Zinc	94.9		P	80 - 120
2350044	Calcium	101	96.2	P/P	80 - 120
2350044	Iron	99.1	97.1	P/P	80 - 120
2350044	Magnesium	99.6	97.2	P/P	80 - 120
2350044	Potassium	103	99.1	P/P	80 - 120
2350044	Sodium	104	99.3	P/P	80 - 120
2350044	Strontium	100	96.7	P/P	80 - 120
2350044	Tin	97.6	94.9	P/P	80 - 120
2350044	Titanium	98.0	94.4	P/P	80 - 120
2350044	Vanadium	96.7	93.5	P/P	80 - 120
2350044	Zinc	97.2	94.2	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P418293

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2350007	Aluminum	97.4		P	75 - 125
2350007	Antimony	102		P	75 - 125
2350007	Arsenic	98.4		P	75 - 125
2350007	Barium	102		P	75 - 125
2350007	Beryllium	91.9		P	75 - 125
2350007	Boron	97.6		P	75 - 125
2350007	Cadmium	104		P	75 - 125
2350007	Chromium	105		P	75 - 125
2350007	Cobalt	92.0		P	75 - 125
2350007	Copper	90.6		P	75 - 125
2350007	Lead	95.7		P	75 - 125
2350007	Manganese	101		P	75 - 125
2350007	Molybdenum	101		P	75 - 125
2350007	Nickel	94.1		P	75 - 125
2350007	Selenium	98.7		P	75 - 125
2350007	Silver	98.9		P	75 - 125
2350007	Thallium	98.3		P	75 - 125
2350044	Aluminum	104	103	P/P	80 - 120
2350044	Antimony	99.4	101	P/P	80 - 120
2350044	Arsenic	100	102	P/P	80 - 120
2350044	Barium	104	105	P/P	80 - 120
2350044	Beryllium	95.5	94.8	P/P	80 - 120
2350044	Boron	101	98.7	P/P	80 - 120
2350044	Cadmium	100	102	P/P	80 - 120
2350044	Chromium	103	102	P/P	80 - 120
2350044	Cobalt	97.5	96.3	P/P	80 - 120
2350044	Copper	101	101	P/P	80 - 120
2350044	Lead	98.7	97.9	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P418293

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2350044	Manganese	104	103	P/P	80 - 120
2350044	Molybdenum	99.4	101	P/P	80 - 120
2350044	Nickel	101	99.7	P/P	80 - 120
2350044	Selenium	101	102	P/P	80 - 120
2350044	Silver	101	99.8	P/P	80 - 120
2350044	Thallium	98.7	98.6	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P418867

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2349934	Chloride	96.7		P	90 - 110
2350213	Chloride	97.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P418870

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2349934	Sulfate	97.4		P	90 - 110
2350213	Sulfate	96.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P418492

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2349935	Ammonia-N	99.4	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P418528

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2349824	NO2NO3-N	99.5	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P418369

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2350029	Total-P	107	107	P/P	90 - 110

Reference Method: EPA 8321B

Batch ID: P418300

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2349650	Acesulfame K	79.1	90.9	P/P	40 - 150
2349650	AMPA	103	98.5	P/P	40 - 150
2349650	Endothall	127	131	P/P	40 - 150
2349650	Glufosinate	103	102	P/P	40 - 150
2349650	Glyphosate	110	107	P/P	40 - 150
2349650	Sucralose	93.0	109	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
 Batch ID: P418371

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2350002	2,4-D	68.8	70.9	P/P	40 - 150
2350002	2,4,5-T	68.5	72.4	P/P	40 - 150
2350002	Acetaminophen	71.5	74.1	P/P	30 - 150
2350002	Acetamiprid	57.5	58.9	P/P	40 - 150
2350002	Afidopyropen	52.4	67.1	P/P	30 - 150
2350002	Bentazon	103	90.0	P/P	30 - 150
2350002	Benzovindiflupyr	70.0	92.2	P/P	40 - 150
2350002	Carbamazepine	90.8	90.3	P/P	40 - 150
2350002	Clothianidin	66.9	55.7	P/P	40 - 150
2350002	Dinotefuran	96.9	96.5	P/P	40 - 150
2350002	Diuron	76.3	86.0	P/P	40 - 150
2350002	Fenuron	80.3	80.9	P/P	40 - 150
2350002	Fluridone	93.5	109	P/P	40 - 150
2350002	Hydrocodone	103	104	P/P	40 - 150
2350002	Ibuprofen	71.3	75.7	P/P	40 - 150
2350002	Imazapyr	70.8	74.5	P/P	40 - 150
2350002	Imidacloprid	53.3	65.8	P/P	40 - 150
2350002	Linuron	86.8	80.1	P/P	40 - 150
2350002	Mandestrobin	89.9	89.6	P/P	40 - 150
2350002	MCCPP	75.3	65.7	P/P	40 - 150
2350002	Naproxen	84.6	81.0	P/P	40 - 150
2350002	Primidone	46.9	51.1	P/P	40 - 150
2350002	Pyraclostrobin	84.9	84.6	P/P	40 - 150
2350002	Silvex	63.0	63.6	P/P	40 - 150
2350002	Thiamethoxam	94.8	92.0	P/P	40 - 150
2350002	Tolfenpyrad	46.9	50.0	P/P	30 - 150
2350002	Triclopyr	65.7	66.5	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
 Batch ID: P418401

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2349634	Fluoride	100	99.2	P/P	94 - 104

Reference Method: SM 5310 B-2011
 Batch ID: P418470

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2349844	Organic Carbon	99.3	99.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P418272

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2350028	Color (true)	10.3	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P418266

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2350028	Turbidity	16.4	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P418293

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2350044	Calcium	3.24	Spike	P	0 - 20
2350044	Iron	1.71	Spike	P	0 - 20
2350044	Magnesium	1.92	Spike	P	0 - 20
2350044	Potassium	3.43	Spike	P	0 - 20
2350044	Sodium	2.90	Spike	P	0 - 20
2350044	Strontium	3.67	Spike	P	0 - 20
2350044	Tin	2.80	Spike	P	0 - 20
2350044	Titanium	3.72	Spike	P	0 - 20
2350044	Vanadium	3.45	Spike	P	0 - 20
2350044	Zinc	3.17	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P418293

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2350044	Aluminum	1.03	Spike	P	0 - 20
2350044	Antimony	1.09	Spike	P	0 - 20
2350044	Arsenic	1.83	Spike	P	0 - 20
2350044	Barium	0.945	Spike	P	0 - 20
2350044	Beryllium	0.704	Spike	P	0 - 20
2350044	Boron	2.31	Spike	P	0 - 20
2350044	Cadmium	1.22	Spike	P	0 - 20
2350044	Chromium	0.615	Spike	P	0 - 20
2350044	Cobalt	1.24	Spike	P	0 - 20
2350044	Copper	0.177	Spike	P	0 - 20
2350044	Lead	0.873	Spike	P	0 - 20
2350044	Manganese	0.230	Spike	P	0 - 20
2350044	Molybdenum	1.68	Spike	P	0 - 20
2350044	Nickel	0.824	Spike	P	0 - 20
2350044	Selenium	1.11	Spike	P	0 - 20
2350044	Silver	1.12	Spike	P	0 - 20
2350044	Thallium	0.183	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P418867

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2349934	Chloride	0.727	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P418870

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2349934	Sulfate	0.715	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P418492

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2349935	Ammonia-N	3.39	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418448

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2349825	Kjeldahl Nitrogen	0.0836	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P418528

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2349824	NO2NO3-N	0.501	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P418369

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2350029	Total-P	0.384	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P418300

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2349650	Acesulfame K	13.8	Spike	P	0 - 30
2349650	AMPA	4.26	Spike	P	0 - 30
2349650	Endothall	2.83	Spike	P	0 - 30
2349650	Glufosinate	0.409	Spike	P	0 - 30
2349650	Glyphosate	3.07	Spike	P	0 - 30
2349650	Sucralose	15.2	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B

Batch ID: P418371

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2350002	2,4-D	2.78	Spike	P	0 - 30
2350002	2,4,5-T	5.55	Spike	P	0 - 30
2350002	Acetaminophen	3.62	Spike	P	0 - 30
2350002	Acetamiprid	2.51	Spike	P	0 - 30
2350002	Afidopyropen	24.5	Spike	P	0 - 30
2350002	Bentazon	8.29	Spike	P	0 - 30
2350002	Benzovindiflupyr	27.3	Spike	P	0 - 30
2350002	Carbamazepine	0.568	Spike	P	0 - 30
2350002	Clothianidin	18.2	Spike	P	0 - 30
2350002	Dinotefuran	0.482	Spike	P	0 - 30
2350002	Diuron	11.9	Spike	P	0 - 30
2350002	Fenuron	0.732	Spike	P	0 - 30
2350002	Fluridone	15.4	Spike	P	0 - 30
2350002	Hydrocodone	1.10	Spike	P	0 - 30
2350002	Ibuprofen	6.05	Spike	P	0 - 30
2350002	Imazapyr	4.43	Spike	P	0 - 30
2350002	Imidacloprid	19.9	Spike	P	0 - 30
2350002	Linuron	8.07	Spike	P	0 - 30
2350002	Mandestrobin	0.383	Spike	P	0 - 30
2350002	MCPP	9.35	Spike	P	0 - 30
2350002	Naproxen	4.33	Spike	P	0 - 30
2350002	Primidone	8.47	Spike	P	0 - 30
2350002	Pyraclostrobin	0.375	Spike	P	0 - 30
2350002	Silvex	0.989	Spike	P	0 - 30
2350002	Thiamethoxam	2.91	Spike	P	0 - 30
2350002	Tolfenpyrad	6.38	Spike	P	0 - 30
2350002	Triclopyr	1.32	Spike	P	0 - 30

Reference Method: SM 2320 B-2011

Batch ID: P418391

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2349634	Total Alkalinity	0.781	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2011

Batch ID: P418646

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2350210	TDS	3.47	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011

Batch ID: P418401

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2349634	Fluoride	0.940	Spike	P	0 - 1.6

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P418470

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2349844	Organic Carbon	0.0327	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2350040

Field Sample ID: G4NW0003

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	71.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	76.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	88.9	P	30 - 160
EPA 8321B	Diuron-d6	107	P	30 - 160
EPA 8321B	Endothall-d6	114	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	93.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	72.9	P	30 - 160
EPA 8321B	Primidone-d5	75.7	P	30 - 160
EPA 8321B	Sucralose-d6	111	P	30 - 160

Lab Sample ID: 2350041

Field Sample ID: G4NW0481

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	75.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	79.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	113	P	30 - 160
EPA 8321B	Diuron-d6	109	P	30 - 160
EPA 8321B	Endothall-d6	117	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	93.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	66.7	P	30 - 160
EPA 8321B	Primidone-d5	68.7	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160

Lab Sample ID: 2350042

Field Sample ID: G4NW0146

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	70.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	81.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	111	P	30 - 160
EPA 8321B	Diuron-d6	97.8	P	30 - 160
EPA 8321B	Endothall-d6	122	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	89.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	65.6	P	30 - 160
EPA 8321B	Primidone-d5	80.4	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160

Lab Sample ID: 2350043

Field Sample ID: FB_08162022

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	69.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	75.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	106	P	30 - 160
EPA 8321B	Diuron-d6	118	P	30 - 160
EPA 8321B	Endothall-d6	115	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	115	P	30 - 160
EPA 8321B	Ibuprofen-d3	62.6	P	30 - 160
EPA 8321B	Primidone-d5	102	P	30 - 160
EPA 8321B	Sucralose-d6	110	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A114165

Included Lab Sample IDs: 2350028, 2350030

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

Reference Method: DEP SOP: NU-094-1

Run ID: A114167

Included Lab Sample IDs: 2350028, 2350030

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.5	101	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A114212

Included Lab Sample IDs: 2350028, 2350030

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

Reference Method: SM 4500-F- C-2011

Run ID: A114212

Included Lab Sample IDs: 2350028, 2350030

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

Reference Method: EPA 8321B

Run ID: A114235

Included Lab Sample IDs: 2350040, 2350041, 2350042, 2350043

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	113	114	P/P	60 - 160
AMPA	114	114	P/P	60 - 160
Endothall	101	109	P/P	60 - 160
Endothall	109	122	P/P	60 - 160
Glufosinate	107	114	P/P	60 - 160
Glufosinate	114	110	P/P	60 - 160
Glyphosate	111	108	P/P	60 - 160
Glyphosate	111	111	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A114238

Included Lab Sample IDs: 2350040, 2350041, 2350042, 2350043

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	96.4	96.5	P/P	60 - 160
Acesulfame K	96.5	95.3	P/P	60 - 160
Sucralose	108	109	P/P	60 - 160
Sucralose	109	109	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A114244

Included Lab Sample IDs: 2350029, 2350031

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.1	97.4	P/P	90 - 110
Organic Carbon	97.0	96.1	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A114252

Included Lab Sample IDs: 2350029, 2350031

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.6	100	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A114256

Included Lab Sample IDs: 2350044, 2350045, 2350046, 2350047

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.3	96.1	P/P	90 - 110
Aluminum	99.3	99.7	P/P	90 - 110
Antimony	95.4	95.3	P/P	90 - 110
Antimony	98.6	96.9	P/P	90 - 110
Arsenic	100	100	P/P	90 - 110
Arsenic	98.0	96.4	P/P	90 - 110
Barium	97.7	97.9	P/P	90 - 110
Barium	97.9	96.4	P/P	90 - 110
Beryllium	93.9	95.5	P/P	90 - 110
Beryllium	95.8	95.7	P/P	90 - 110
Cadmium	102	102	P/P	90 - 110
Cadmium	106	105	P/P	90 - 110
Chromium	101	102	P/P	90 - 110
Chromium	105	104	P/P	90 - 110
Cobalt	92.3	91.7	P/P	90 - 110
Cobalt	97.0	96.5	P/P	90 - 110
Copper	100	99.4	P/P	90 - 110
Copper	93.7	92.6	P/P	90 - 110
Lead	92.6	92.0	P/P	90 - 110
Lead	94.6	93.3	P/P	90 - 110
Manganese	101	101	P/P	90 - 110
Manganese	101	100	P/P	90 - 110
Molybdenum	96.7	96.3	P/P	90 - 110
Molybdenum	97.9	97.0	P/P	90 - 110
Nickel	92.5	91.9	P/P	90 - 110
Nickel	99.4	98.7	P/P	90 - 110
Selenium	101	101	P/P	90 - 110
Selenium	103	100	P/P	90 - 110
Silver	97.8	97.4	P/P	90 - 110
Silver	98.7	97.9	P/P	90 - 110
Thallium	98.2	97.1	P/P	90 - 110
Thallium	98.8	99.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A114268

Included Lab Sample IDs: 2350029, 2350031

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.0	98.0	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A114284

Included Lab Sample IDs: 2350044, 2350045, 2350046, 2350047

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Boron	93.5	90.6	P/P	90 - 110
Boron	93.7	93.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A114304

Included Lab Sample IDs: 2350029, 2350031

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A114314

Included Lab Sample IDs: 2350029, 2350031

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.9	97.8	P/P	90 - 110
Kjeldahl Nitrogen	97.8	97.2	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A114332

Included Lab Sample IDs: 2350044, 2350045, 2350046, 2350047

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	93.6	94.8	P/P	90 - 110
Calcium	96.2	94.6	P/P	90 - 110
Iron	92.4	94.3	P/P	90 - 110
Iron	96.4	92.2	P/P	90 - 110
Magnesium	93.2	94.7	P/P	90 - 110
Magnesium	96.3	93.0	P/P	90 - 110
Potassium	102	99.1	P/P	90 - 110
Potassium	99.8	100	P/P	90 - 110
Sodium	94.1	95.7	P/P	90 - 110
Sodium	97.5	94.4	P/P	90 - 110
Strontium	101	96.8	P/P	90 - 110
Strontium	96.6	95.5	P/P	90 - 110
Strontium	97.3	96.6	P/P	90 - 110
Tin	90.4	93.2	P/P	90 - 110
Tin	93.2	90.7	P/P	90 - 110
Tin	94.0	94.9	P/P	90 - 110
Titanium	95.3	97.0	P/P	90 - 110
Titanium	97.0	94.7	P/P	90 - 110
Titanium	99.6	96.6	P/P	90 - 110
Vanadium	103	99.8	P/P	90 - 110
Vanadium	98.7	99.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A114332

Included Lab Sample IDs: 2350044, 2350045, 2350046, 2350047

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Vanadium	99.9	97.6	P/P	90 - 110
Zinc	97.3	99.8	P/P	90 - 110
Zinc	99.4	101	P/P	90 - 110
Zinc	99.8	98.4	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A114335

Included Lab Sample IDs: 2350028, 2350030

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	97.8	98.6	P/P	90 - 110
Chloride	98.6	98.4	P/P	90 - 110
Sulfate	98.5	99.3	P/P	90 - 110
Sulfate	99.3	99.1	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A114369

Included Lab Sample IDs: 2350040, 2350041, 2350042, 2350043

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	110	107	P/P	50 - 150
2,4-D	95.2	110	P/P	50 - 150
2,4,5-T	116	93.6	P/P	50 - 150
2,4,5-T	92.9	116	P/P	50 - 150
Acetaminophen	90.1	90.8	P/P	60 - 160
Acetaminophen	95.3	90.1	P/P	60 - 160
Acetamiprid	122	115	P/P	50 - 150
Acetamiprid	99.7	122	P/P	50 - 150
Afidopyropen	85.5	94.4	P/P	50 - 150
Afidopyropen	94.4	108	P/P	50 - 150
Bentazon	103	96.7	P/P	50 - 160
Bentazon	96.7	111	P/P	50 - 160
Benzovindiflupyr	106	115	P/P	50 - 150
Benzovindiflupyr	115	112	P/P	50 - 150
Carbamazepine	106	113	P/P	60 - 150
Carbamazepine	100	106	P/P	60 - 150
Clothianidin	86.1	95.8	P/P	60 - 150
Clothianidin	98.8	86.1	P/P	60 - 150
Dinotefuran	101	102	P/P	50 - 150
Dinotefuran	102	99.7	P/P	50 - 150
Diuron	89.8	94.2	P/P	60 - 160
Diuron	98.3	89.8	P/P	60 - 160
Fenuron	95.4	93.1	P/P	60 - 150
Fenuron	98.1	95.4	P/P	60 - 150
Fluridone	102	105	P/P	60 - 160
Fluridone	125	102	P/P	60 - 160
Hydrocodone	96.1	95.5	P/P	60 - 150
Hydrocodone	99.2	96.1	P/P	60 - 150
Ibuprofen	60.3	104	P/P	50 - 160
Ibuprofen	85.5	60.3	P/P	50 - 160
Imazapyr	83.0	72.3	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A114369

Included Lab Sample IDs: 2350040, 2350041, 2350042, 2350043

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Imazapyr	88.2	83.0	P/P	50 - 150
Imidacloprid	85.1	97.8	P/P	60 - 150
Imidacloprid	97.8	100	P/P	60 - 150
Linuron	70.8	97.1	P/P	60 - 150
Linuron	97.1	111	P/P	60 - 150
Mandestrobin	104	94.9	P/P	50 - 150
Mandestrobin	94.9	98.1	P/P	50 - 150
MCP	88.0	85.1	P/P	50 - 150
MCP	95.0	88.0	P/P	50 - 150
Naproxen	110	111	P/P	50 - 160
Naproxen	141	110	P/P	50 - 160
Primidone	102	87.3	P/P	60 - 150
Primidone	103	102	P/P	60 - 150
Pyraclostrobin	102	99.8	P/P	60 - 150
Pyraclostrobin	99.8	95.7	P/P	60 - 150
Silvex	101	99.3	P/P	50 - 150
Silvex	99.3	71.3	P/P	50 - 150
Thiamethoxam	103	99.1	P/P	50 - 150
Thiamethoxam	96.0	103	P/P	50 - 150
Tolfenpyrad	93.6	98.7	P/P	60 - 150
Tolfenpyrad	97.1	93.6	P/P	60 - 150
Triclopyr	103	106	P/P	50 - 150
Triclopyr	106	83.0	P/P	50 - 150

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A114528

Included Lab Sample IDs: 2350046

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	97.8	P/P	90 - 110
Iron	101	97.5	P/P	90 - 110
Magnesium	101	97.8	P/P	90 - 110
Potassium	102	97.4	P/P	90 - 110
Sodium	99.2	94.2	P/P	90 - 110

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision SMP	MS
			LCS				
DEP SOP: NU-094-1	Color (true)	99.6				10.3	
EPA 180.1 Rev. 2.0	Turbidity	97.1				16.4	
EPA 200.7 Rev. 4.4	Calcium	99.2	101	96.2			3.24
	Iron	98.7	96.8	99.1	97.1		1.71
	Magnesium	99.2	99.9	99.6	97.2		1.92
	Potassium	104	104	103	99.1		3.43
	Sodium	104	104	104	99.3		2.90
	Strontium	101	99.3	100	96.7		3.67
	Tin	97.2	93.7	97.6	94.9		2.80
	Titanium	98.4	96.3	98.0	94.4		3.72
	Vanadium	98.4	97.5	96.7	93.5		3.45
	Zinc	97.7	94.9	97.2	94.2		3.17
EPA 200.8 Rev. 5.4	Aluminum	103	104	103	97.4		1.03
	Antimony	99.2	99.4	101	102		1.09
	Arsenic	101	100	102	98.4		1.83
	Barium	104	104	105	102		0.945
	Beryllium	94.9	95.5	94.8	91.9		0.704
	Boron	99.9	97.6	101	98.7		2.31
	Cadmium	103	100	102	104		1.22
	Chromium	102	103	102	105		0.615
	Cobalt	96.9	97.5	96.3	92.0		1.24
	Copper	98.3	101	101	90.6		0.177
	Lead	96.5	98.7	97.9	95.7		0.873
	Manganese	101	104	103	101		0.230
	Molybdenum	99.4	99.4	101	101		1.68
	Nickel	99.4	101	99.7	94.1		0.824
	Selenium	101	101	102	98.7		1.11
	Silver	102	101	99.8	98.9		1.12
	Thallium	97.0	98.7	98.6	98.3		0.183
EPA 300.0 Rev. 2.1	Chloride	98.0	96.7	97.0		0.727	
	Sulfate	98.6	97.4	96.2		0.715	
EPA 350.1 Rev. 2.0	Ammonia-N	100	99.4	104			3.39
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101					0.0836
EPA 353.2 Rev. 2.0	NO2NO3-N	98.5	99.5	100			0.501
EPA 365.1 Rev. 2.0	Total-P	108	107	107			0.384
EPA 8321B	2,4-D	66.7	68.8	70.9			2.78
	2,4,5-T	72.5	68.5	72.4			5.55
	Acesulfame K	93.5	79.1	90.9			13.8
	Acetaminophen	88.1	71.5	74.1			3.62
	Acetamiprid	80.9	57.5	58.9			2.51
	Afidopyropen	89.0	52.4	67.1			24.5
	AMPA	111	103	98.5			4.26
	Bentazon	114	103	90.0			8.29
	Benzovindiflupyr	98.5	70.0	92.2			27.3
	Carbamazepine	117	90.8	90.3			0.568
	Clothianidin	100	66.9	55.7			18.2
	Dinotefuran	108	96.9	96.5			0.482
	Diuron	86.2	76.3	86.0			11.9
	Endothall	108	127	131			2.83
	Fenuron	113	80.3	80.9			0.732
	Fluridone	90.2	93.5	109			15.4
	Glufosinate	117	103	102			0.409
	Glyphosate	109	110	107			3.07
	Hydrocodone	99.0	103	104			1.10

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8321B	Ibuprofen	81.9	71.3	75.7			6.05
	Imazapyr	86.3	70.8	74.5			4.43
	Imidacloprid	93.3	53.3	65.8			19.9
	Linuron	101	86.8	80.1			8.07
	Mandestrobin	101	89.9	89.6			0.383
	MCPP	85.7	75.3	65.7			9.35
	Naproxen	148	84.6	81.0			4.33
	Primidone	89.4	46.9	51.1			8.47
	Pyraclostrobin	88.9	84.9	84.6			0.375
	Silvex	66.8	63.0	63.6			0.989
	Sucralose	107	93.0	109			15.2
	Thiamethoxam	101	94.8	92.0			2.91
	Tolfenpyrad	40.5	46.9	50.0			6.38
	Triclopyr	68.9	65.7	66.5			1.32
SM 2320 B-2011	Total Alkalinity	98.9				0.781	
SM 2540 C-2011	TDS					3.47	
SM 4500-F- C-2011	Fluoride	101	100	99.2			0.940
SM 5310 B-2011	Organic Carbon	97.0	99.3	99.4			0.0327

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2350028, 2350030
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2350028, 2350030
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2350044, 2350045, 2350046, 2350047
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2350044, 2350045, 2350046, 2350047
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2350028, 2350030
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2350028, 2350030
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2350029, 2350031
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2350029, 2350031
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2350029, 2350031
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2350029, 2350031
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2350040, 2350041, 2350042, 2350043
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2350028, 2350030
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2350044, 2350045, 2350046
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2350028, 2350030
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2350028, 2350030
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2350028, 2350030
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2350029, 2350031

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	08/17/2022			08/17/2022 16:28	Anna M. Plaviak	2350028, 2350030
EPA 180.1 Rev. 2.0	08/17/2022			08/17/2022 15:02	Khloe J Berg	2350028
	08/17/2022			08/17/2022 15:18	Khloe J Berg	2350030
EPA 200.7 Rev. 4.4	08/17/2022	08/18/2022 10:30	Megan Whitefoot	08/25/2022 01:44	McKinley C Carter	2350047
	08/17/2022	08/18/2022 10:30	Megan Whitefoot	08/25/2022 04:25	McKinley C Carter	2350044
	08/17/2022	08/18/2022 10:30	Megan Whitefoot	08/25/2022 04:54	McKinley C Carter	2350045
	08/17/2022	08/18/2022 10:30	Megan Whitefoot	08/25/2022 05:29	McKinley C Carter	2350046
	08/17/2022	08/18/2022 10:30	Megan Whitefoot	09/03/2022 02:15	McKinley C Carter	2350046
EPA 200.8 Rev. 5.4	08/17/2022	08/18/2022 10:30	Megan Whitefoot	08/22/2022 15:24	Emily M Philpot	2350047
	08/17/2022	08/18/2022 10:30	Megan Whitefoot	08/22/2022 16:02	Emily M Philpot	2350044
	08/17/2022	08/18/2022 10:30	Megan Whitefoot	08/22/2022 19:06	Emily M Philpot	2350045
	08/17/2022	08/18/2022 10:30	Megan Whitefoot	08/22/2022 19:15	Emily M Philpot	2350046
	08/17/2022	08/18/2022 10:30	Megan Whitefoot	08/24/2022 02:00	Megan Whitefoot	2350047
	08/17/2022	08/18/2022 10:30	Megan Whitefoot	08/24/2022 02:09	Megan Whitefoot	2350046
	08/17/2022	08/18/2022 10:30	Megan Whitefoot	08/24/2022 04:07	Megan Whitefoot	2350045
	08/17/2022	08/18/2022 10:30	Megan Whitefoot	08/24/2022 04:16	Megan Whitefoot	2350044
EPA 300.0 Rev. 2.1	08/17/2022			08/26/2022 18:35	Anna M. Plaviak	2350028
	08/17/2022			08/26/2022 19:17	Anna M. Plaviak	2350030
EPA 350.1 Rev. 2.0	08/17/2022			08/22/2022 16:26	Judith K. Clark	2350029
	08/17/2022			08/22/2022 16:28	Judith K. Clark	2350031
EPA 351.2 Rev. 2.0	08/17/2022	08/23/2022 16:31	Samantha L Bates	08/24/2022 17:08	Samantha L Bates	2350029
	08/17/2022	08/23/2022 16:31	Samantha L Bates	08/24/2022 17:13	Samantha L Bates	2350031
EPA 353.2 Rev. 2.0	08/17/2022			08/23/2022 10:22	Beverly Y. Sanders	2350029
	08/17/2022			08/23/2022 10:23	Beverly Y. Sanders	2350031
EPA 365.1 Rev. 2.0	08/17/2022	08/23/2022 18:30	Simonne.V. Calhoun	08/24/2022 16:11	James L Waggeberby	2350031
	08/17/2022	08/23/2022 18:30	Simonne.V. Calhoun	08/24/2022 16:12	James L Waggeberby	2350029
EPA 8321B	08/17/2022	08/19/2022 09:00	Umesh Chiluwal	08/19/2022 11:37	Umesh Chiluwal	2350040
	08/17/2022	08/19/2022 09:00	Umesh Chiluwal	08/19/2022 11:50	Umesh Chiluwal	2350041
	08/17/2022	08/19/2022 09:00	Umesh Chiluwal	08/19/2022 12:16	Umesh Chiluwal	2350042
	08/17/2022	08/19/2022 09:00	Umesh Chiluwal	08/19/2022 12:29	Umesh Chiluwal	2350043
	08/17/2022	08/19/2022 09:00	Umesh Chiluwal	08/19/2022 20:09	Umesh Chiluwal	2350040
	08/17/2022	08/19/2022 09:00	Umesh Chiluwal	08/19/2022 20:24	Umesh Chiluwal	2350041
	08/17/2022	08/19/2022 09:00	Umesh Chiluwal	08/19/2022 20:54	Umesh Chiluwal	2350042
	08/17/2022	08/19/2022 09:00	Umesh Chiluwal	08/19/2022 21:09	Umesh Chiluwal	2350043
	08/17/2022	08/22/2022 09:30	June Rhew	08/26/2022 08:59	Juyoung Kim	2350040
	08/17/2022	08/22/2022 09:30	June Rhew	08/26/2022 09:20	Juyoung Kim	2350041
	08/17/2022	08/22/2022 09:30	June Rhew	08/26/2022 09:41	Juyoung Kim	2350042
	08/17/2022	08/22/2022 09:30	June Rhew	08/26/2022 10:22	Juyoung Kim	2350043
SM 2320 B-2011	08/17/2022			08/19/2022 04:25	Adam P Silver	2350028
	08/17/2022			08/19/2022 04:34	Adam P Silver	2350030

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2340 B-2011	08/17/2022			08/25/2022 04:25	McKinley C Carter	2350044
	08/17/2022			08/25/2022 04:54	McKinley C Carter	2350045
	08/17/2022			09/03/2022 02:15	McKinley C Carter	2350046
SM 2540 C-2011	08/17/2022			08/19/2022 15:07	Yijie Li	2350028, 2350030
SM 2540 D-2011	08/17/2022			08/19/2022 15:07	Yijie Li	2350028, 2350030
SM 4500-F- C-2011	08/17/2022			08/19/2022 04:25	Adam P Silver	2350028
	08/17/2022			08/19/2022 04:34	Adam P Silver	2350030
SM 5310 B-2011	08/17/2022			08/19/2022 22:10	Judith K. Clark	2350029
	08/17/2022			08/19/2022 22:54	Judith K. Clark	2350031