

Chemical Analysis Report

NW-DIST-2022-04-27-01

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-2022-03-28-37**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 20-MAY-2022 09:04

A handwritten signature in black ink, appearing to read "Liang Lin", is shown on a light-colored background.

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: Pace Mill Creek upstream of Hwy 90

Collection Date/Time: 04/25/2022 10:15

Field ID: G4NW0481

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2322180	EPA 8321B	2,4-D	0.0020	U	ug/L	P412965	
		Acesulfame K	0.10	U	ug/L	P412884	
		2,4,5-T	0.0040	U	ug/L	P412965	
		AMPA	0.10	U	ug/L	P412884	
		Acetaminophen	0.0080	U	ug/L	P412965	
		Endothall	0.25	U	ug/L	P412884	
		Acetamiprid	0.0020	U	ug/L	P412965	MS
		Glufosinate	0.10	U	ug/L	P412884	
		Glyphosate	0.10	U	ug/L	P412884	
		Afidopyropen	0.0020	U	ug/L	P412965	
		Bentazon	8.0E-04	U	ug/L	P412965	
		Sucralose	1.0		ug/L	P412884	
		Benzovindiflupyr	0.0020	U	ug/L	P412965	
		Carbamazepine	8.0E-04	U	ug/L	P412965	
		Clothianidin	0.0020	U	ug/L	P412965	
		Dinotefuran	0.0020	U	ug/L	P412965	
		Diuron	0.0020	U	ug/L	P412965	
		Fenuron	0.032	U	ug/L	P412965	
		Fluridone	8.0E-04	U	ug/L	P412965	
		Imazapyr	0.0040	U	ug/L	P412965	
		Hydrocodone	0.0020	U	ug/L	P412965	
		Ibuprofen	0.020	U	ug/L	P412965	
		Imidacloprid	0.0051	I	ug/L	P412965	
		Linuron	0.0040	U	ug/L	P412965	
		Mandestrobin	0.0020	U	ug/L	P412965	
		MCPP	0.0040	U	ug/L	P412965	
		Naproxen	0.0080	U	ug/L	P412965	
		Primidone	0.0040	U	ug/L	P412965	
		Pyraclostrobin	0.0020	U	ug/L	P412965	
		Silvex	0.0040	U	ug/L	P412965	
		Thiamethoxam	0.0020	U	ug/L	P412965	
		Tolfenpyrad	0.0020	U	ug/L	P412965	
		Triclopyr	0.0040	U	ug/L	P412965	
2322183	EPA 200.7 Rev. 4.4	Calcium	3.39		mg/L	P413013	
		Iron	1.29E+03		ug/L	P413013	
		Magnesium	1.34		mg/L	P413013	
		Potassium	0.65	I	mg/L	P413013	
		Sodium	4.2		mg/L	P413013	
		Strontium	17.6		ug/L	P413013	
		Tin	3.0	U	ug/L	P413013	
		Titanium	0.93	I	ug/L	P413013	
		Vanadium	2.0	U	ug/L	P413013	
		Zinc	5.0	U	ug/L	P413013	
	EPA 200.8 Rev. 5.4	Aluminum	40		ug/L	P413385	

Field ID: G4NW0481

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2322183	EPA 200.8 Rev. 5.4	Antimony	0.050	U	ug/L	P413013	
		Arsenic	0.46		ug/L	P413013	
		Barium	25.4		ug/L	P413013	
		Beryllium	0.014	I	ug/L	P413013	
		Boron**	20.1		ug/L	P413013	
		Cadmium	0.020	U	ug/L	P413013	
		Chromium	0.40	U	ug/L	P413013	
		Cobalt	0.231		ug/L	P413013	
		Copper	0.40	U	ug/L	P413013	
		Lead	0.51		ug/L	P413013	
		Manganese	34.9		ug/L	P413013	
		Molybdenum	0.15	U	ug/L	P413013	
		Nickel	0.50	U	ug/L	P413013	
		Selenium	0.20	U	ug/L	P413013	
		Silver	0.010	U	ug/L	P413013	
		Thallium	0.10	U	ug/L	P413013	
	SM 2340 B-2011	Hardness	14.0		mg/L	P413013	

Ref. Method and Comment:
 EPA 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 05/04/2022.

Sample Location: Jacobs Creek Upstream of Bagwell Rd

Collection Date/Time: 04/25/2022 10:40

Field ID: G4NW0003

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2322181	EPA 8321B	2,4-D	0.0020	U	ug/L	P412965	
		Acesulfame K	0.10	U	ug/L	P412884	
		2,4,5-T	0.0040	U	ug/L	P412965	
		AMPA	0.10	U	ug/L	P412884	
		Acetaminophen	0.0080	U	ug/L	P412965	
		Endothall	0.25	U	ug/L	P412884	
		Acetamiprid	0.0020	U	ug/L	P412965	MS
		Glufosinate	0.10	U	ug/L	P412884	
		Glyphosate	0.10	U	ug/L	P412884	
		Afidopyropen	0.0020	U	ug/L	P412965	
		Bentazon	8.0E-04	U	ug/L	P412965	
		Sucralose	0.57		ug/L	P412884	
		Benzovindiflupyr	0.0020	U	ug/L	P412965	
		Carbamazepine	8.0E-04	U	ug/L	P412965	
		Clothianidin	0.0020	U	ug/L	P412965	
		Dinotefuran	0.0020	U	ug/L	P412965	
		Diuron	0.0020	U	ug/L	P412965	
		Fenuron	0.032	U	ug/L	P412965	
		Fluridone	8.0E-04	U	ug/L	P412965	
		Imazapyr	0.0040	U	ug/L	P412965	
		Hydrocodone	0.0020	U	ug/L	P412965	
		Ibuprofen	0.020	U	ug/L	P412965	
		Imidacloprid	0.0037	I	ug/L	P412965	
		Linuron	0.0040	U	ug/L	P412965	
		Mandestrobin	0.0020	U	ug/L	P412965	
		MCPP	0.0040	U	ug/L	P412965	
		Naproxen	0.0080	U	ug/L	P412965	
		Primidone	0.0040	U	ug/L	P412965	
		Pyraclostrobin	0.0020	U	ug/L	P412965	
		Silvex	0.0040	U	ug/L	P412965	
		Thiamethoxam	0.0020	U	ug/L	P412965	
		Tolfenpyrad	0.0020	U	ug/L	P412965	
		Triclopyr	0.0040	U	ug/L	P412965	
2322184	EPA 200.7 Rev. 4.4	Calcium	1.68		mg/L	P413013	
		Iron	640		ug/L	P413013	
		Magnesium	1.24		mg/L	P413013	
		Potassium	0.57	I	mg/L	P413013	
		Sodium	3.1		mg/L	P413013	
		Strontium	11.7		ug/L	P413013	
		Tin	3.0	U	ug/L	P413013	
		Titanium	0.75	U	ug/L	P413013	
		Vanadium	2.0	U	ug/L	P413013	
		Zinc	5.0	U	ug/L	P413013	
	EPA 200.8 Rev. 5.4	Aluminum	90		ug/L	P413385	

Field ID: G4NW0003

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2322184	EPA 200.8 Rev. 5.4	Antimony	0.050	U	ug/L	P413013	
		Arsenic	0.26		ug/L	P413013	
		Barium	24.6		ug/L	P413013	
		Beryllium	0.010	U	ug/L	P413013	
		Boron**	15.3		ug/L	P413013	
		Cadmium	0.020	U	ug/L	P413013	
		Chromium	0.40	U	ug/L	P413013	
		Cobalt	0.208		ug/L	P413013	
		Copper	0.40	U	ug/L	P413013	
		Lead	0.20	U	ug/L	P413013	
		Manganese	26.1		ug/L	P413013	
		Molybdenum	0.15	U	ug/L	P413013	
		Nickel	0.50	U	ug/L	P413013	
		Selenium	0.20	U	ug/L	P413013	
		Silver	0.010	U	ug/L	P413013	
	SM 2340 B-2011	Thallium	0.10	U	ug/L	P413013	
		Hardness	9.3		mg/L	P413013	

Sample Location: Pace Mill Creek end of Rodella St

Collection Date/Time: 04/25/2022 11:00

Field ID: G4NW0146

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2322182	EPA 8321B	2,4-D	0.0020	U	ug/L	P412965	
		Acesulfame K	0.10	U	ug/L	P412884	
		2,4,5-T	0.0040	U	ug/L	P412965	
		AMPA	0.10	U	ug/L	P412884	
		Acetaminophen	0.010	I	ug/L	P412965	
		Endothall	0.25	U	ug/L	P412884	
		Acetamiprid	0.0020	U	ug/L	P412965	MS
		Glufosinate	0.10	U	ug/L	P412884	
		Glyphosate	0.10	U	ug/L	P412884	
		Afidopyropen	0.0020	U	ug/L	P412965	
		Bentazon	8.0E-04	U	ug/L	P412965	
		Sucralose	0.62		ug/L	P412884	
		Benzovindiflupyr	0.0020	U	ug/L	P412965	
		Carbamazepine	8.0E-04	U	ug/L	P412965	
		Clothianidin	0.0020	U	ug/L	P412965	
		Dinotefuran	0.0020	U	ug/L	P412965	
		Diuron	0.0020	U	ug/L	P412965	
		Fenuron	0.032	U	ug/L	P412965	
		Fluridone	8.0E-04	U	ug/L	P412965	
		Imazapyr	0.0040	U	ug/L	P412965	
		Hydrocodone	0.0020	U	ug/L	P412965	
		Ibuprofen	0.020	U	ug/L	P412965	
		Imidacloprid	0.0029	I	ug/L	P412965	
		Linuron	0.0040	U	ug/L	P412965	
		Mandestrobin	0.0020	U	ug/L	P412965	
		MCPP	0.0040	U	ug/L	P412965	
		Naproxen	0.0080	U	ug/L	P412965	
		Primidone	0.0040	U	ug/L	P412965	
		Pyraclostrobin	0.0020	U	ug/L	P412965	
		Silvex	0.0040	U	ug/L	P412965	
		Thiamethoxam	0.0020	U	ug/L	P412965	
		Tolfenpyrad	0.0020	U	ug/L	P412965	
		Triclopyr	0.0040	U	ug/L	P412965	
2322185	EPA 200.7 Rev. 4.4	Calcium	3.42		mg/L	P413013	
		Iron	1.94E+03		ug/L	P413013	
		Magnesium	1.23		mg/L	P413013	
		Potassium	0.57	I	mg/L	P413013	
		Sodium	4.4		mg/L	P413013	
		Strontium	14.1		ug/L	P413013	
		Tin	3.0	U	ug/L	P413013	
		Titanium	1.5	I	ug/L	P413013	
		Vanadium	2.0	U	ug/L	P413013	
		Zinc	5.0	U	ug/L	P413013	
	EPA 200.8 Rev. 5.4	Aluminum	128		ug/L	P413385	

Field ID: G4NW0146

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2322185	EPA 200.8 Rev. 5.4	Antimony	0.051	I	ug/L	P413013	
		Arsenic	0.60		ug/L	P413013	
		Barium	16.9		ug/L	P413013	
		Beryllium	0.010	U	ug/L	P413013	
		Boron**	15.6		ug/L	P413013	
		Cadmium	0.020	U	ug/L	P413013	
		Chromium	0.40	U	ug/L	P413013	
		Cobalt	0.318		ug/L	P413013	
		Copper	0.45	I	ug/L	P413013	
		Lead	0.86		ug/L	P413013	
		Manganese	85.6		ug/L	P413013	
		Molybdenum	0.15	U	ug/L	P413013	
		Nickel	0.50	U	ug/L	P413013	
		Selenium	0.20	U	ug/L	P413013	
		Silver	0.010	U	ug/L	P413013	
		Thallium	0.10	U	ug/L	P413013	
	SM 2340 B-2011	Hardness	13.6		mg/L	P413013	

Ref. Method and Comment:
EPA 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 05/09/2022.

Sample Location: Collins Mill Creek upstream of Conecuh Street Collection Date/Time: 04/25/2022 11:25

Field ID: G4NW0507

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2322170	DEP SOP: NU-094-1	Color (true)**	9.5	A	PCU	P412947	
	EPA 180.1 Rev. 2.0	Turbidity	1.2	A	NTU	P412998	
	EPA 300.0 Rev. 2.1	Chloride	5.8		mg Cl/L	P413256	
		Sulfate	1.4		mg SO4/L	P413258	
	SM 2320 B-2011	Total Alkalinity	12		mg CaCO3/L	P413552	
	SM 2540 C-2011	TDS	31		mg/L	P413423	
	SM 2540 D-2011	TSS	3	I	mg/L	P413471	
	SM 4500-F- C-2011	Fluoride	0.035	U	mg F/L	P413555	
2322171	EPA 350.1 Rev. 2.0	Ammonia-N	0.036		mg N/L	P413504	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.20		mg N/L	P413273	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.32		mg N/L	P413218	
	EPA 365.1 Rev. 2.0	Total-P	0.008		mg P/L	P413232	
	SM 5310 B-2011	Organic Carbon	2.1		mg C/L	P413245	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 351.2 Rev. 2.0: Batch relative percent difference is unavailable because of analytical difficulties.

Sample Location: FB_04252022

Collection Date/Time: 04/25/2022 11:30

Field ID: FB_04252022

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2322212	DEP SOP: NU-094-1	Color (true)**	2.5	U	PCU	P412947	
	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P412998	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P413256	
		Sulfate	0.20	U	mg SO4/L	P413258	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P413552	
	SM 2540 C-2011	TDS	15	U	mg/L	P413421	
	SM 2540 D-2011	TSS	2	U	mg/L	P413469	
2322213	SM 4500-F- C-2011	Fluoride	0.035	U	mg F/L	P413555	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P413504	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P413273	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P413288	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P413233	
2322214	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P413245	
	EPA 8321B	2,4-D	0.0020	U	ug/L	P412965	
		Acesulfame K	0.10	U	ug/L	P412970	
		2,4,5-T	0.0040	U	ug/L	P412965	
		AMPA	0.10	U	ug/L	P412970	
		Acetaminophen	0.0080	U	ug/L	P412965	
		Endothall	0.25	U	ug/L	P412970	
		Acetamiprid	0.0020	U	ug/L	P412965	MS
		Glufosinate	0.10	U	ug/L	P412970	
		Glyphosate	0.10	U	ug/L	P412970	
		Afidopyropen	0.0020	U	ug/L	P412965	
		Bentazon	8.0E-04	U	ug/L	P412965	
		Sucralose	0.010	U	ug/L	P412970	
		Benzovindiflupyr	0.0020	U	ug/L	P412965	
		Carbamazepine	8.0E-04	U	ug/L	P412965	
		Clothianidin	0.0020	U	ug/L	P412965	
		Dinotefuran	0.0020	U	ug/L	P412965	
		Diuron	0.0020	U	ug/L	P412965	
		Fenuron	0.032	U	ug/L	P412965	
		Fluridone	8.0E-04	U	ug/L	P412965	
		Imazapyr	0.0040	U	ug/L	P412965	
		Hydrocodone	0.0020	U	ug/L	P412965	
		Ibuprofen	0.020	U	ug/L	P412965	
		Imidacloprid	0.0020	U	ug/L	P412965	
		Linuron	0.0040	U	ug/L	P412965	
		Mandestrobin	0.0020	U	ug/L	P412965	
		MCPP	0.0040	U	ug/L	P412965	
		Naproxen	0.0080	U	ug/L	P412965	
		Primidone	0.0040	U	ug/L	P412965	
		Pyraclostrobin	0.0020	U	ug/L	P412965	
		Silvex	0.0040	U	ug/L	P412965	
		Thiamethoxam	0.0020	U	ug/L	P412965	

Field ID: FB_04252022

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2322214	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P412965	
		Triclopyr	0.0040	U	ug/L	P412965	
2322215	EPA 200.7 Rev. 4.4	Calcium	0.075	U	mg/L	P413106	
		Iron	30	U	ug/L	P413106	
		Magnesium	0.040	U	mg/L	P413106	
		Potassium	0.30	U	mg/L	P413106	
		Sodium	0.50	U	mg/L	P413106	
		Strontium	2.0	U	ug/L	P413106	
		Tin	3.0	U	ug/L	P413106	
		Titanium	0.75	U	ug/L	P413106	
		Vanadium	2.0	U	ug/L	P413106	
		Zinc	5.0	U	ug/L	P413106	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P413106	
		Antimony	0.050	U	ug/L	P413106	
		Arsenic	0.050	U	ug/L	P413106	
		Barium	0.20	U	ug/L	P413106	
		Beryllium	0.010	U	ug/L	P413106	
		Boron**	2.0	U	ug/L	P413106	
		Cadmium	0.020	U	ug/L	P413106	
		Chromium	0.40	U	ug/L	P413106	
		Cobalt	0.020	U	ug/L	P413106	
		Copper	0.80	I	ug/L	P413106	
		Lead	0.20	U	ug/L	P413106	
		Manganese	0.10	U	ug/L	P413106	
		Molybdenum	0.15	U	ug/L	P413106	
		Nickel	0.50	U	ug/L	P413106	
		Selenium	0.20	U	ug/L	P413106	
		Silver	0.010	U	ug/L	P413106	
		Thallium	0.10	U	ug/L	P413106	
	SM 2340 B-2011	Hardness	0.35	U	mg/L	P413106	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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 relative percent difference is unavailable because of analytical difficulties.

EPA 200.8 Rev. 5.4: The copper result was confirmed in the undigested sample on 05/02/2022.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P412947

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P412998

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P413013

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 200.7 Rev. 4.4
Batch ID: P413106

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: P413013

Component	Result	Code	Units
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P413013

Component	Result	Code	Units
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 200.8 Rev. 5.4
Batch ID: P413106

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 200.8 Rev. 5.4
Batch ID: P413385

Component	Result	Code	Units
Aluminum	5.0	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413256

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413258

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413504

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413273

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413218

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413288

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413232

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413233

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

Reference Method: EPA 8321B
Batch ID: P412884

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: P412965

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: P412965

Component	Result	Code	Units
Fenuron	0.032	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0040	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: EPA 8321B

Batch ID: P412970

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

Reference Method: SM 2320 B-2011

Batch ID: P413552

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

Reference Method: SM 2540 C-2011

Batch ID: P413421

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2011

Batch ID: P413423

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011

Batch ID: P413469

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P413471

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P413555

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P413245

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: P412947

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.8		P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P412998

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P413013

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	100		P	85 - 115
Iron	104		P	85 - 115
Magnesium	103		P	85 - 115
Potassium	103		P	85 - 115
Sodium	101		P	85 - 115
Strontium	101		P	85 - 115
Tin	102		P	85 - 115
Titanium	102		P	85 - 115
Vanadium	95.9		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P413106

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	106		P	85 - 115
Iron	107		P	85 - 115
Magnesium	109		P	85 - 115
Potassium	101		P	85 - 115
Sodium	100		P	85 - 115
Strontium	94.6		P	85 - 115
Tin	98.6		P	85 - 115
Titanium	100		P	85 - 115
Vanadium	94.8		P	85 - 115
Zinc	100		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P413013

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Antimony	97.3		P	85 - 115
Arsenic	98.9		P	85 - 115
Barium	104		P	85 - 115
Beryllium	91.3		P	85 - 115
Boron	103		P	85 - 115
Cadmium	98.6		P	85 - 115
Chromium	98.5		P	85 - 115
Cobalt	98.9		P	85 - 115
Copper	94.7		P	85 - 115
Lead	96.5		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P413013

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Manganese	99.4		P	85 - 115
Molybdenum	96.1		P	85 - 115
Nickel	97.7		P	85 - 115
Selenium	96.3		P	85 - 115
Silver	99.5		P	85 - 115
Thallium	97.5		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P413106

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	96.5		P	85 - 115
Antimony	95.3		P	85 - 115
Arsenic	96.6		P	85 - 115
Barium	99.7		P	85 - 115
Beryllium	94.6		P	85 - 115
Boron	98.2		P	85 - 115
Cadmium	93.1		P	85 - 115
Chromium	91.9		P	85 - 115
Cobalt	94.6		P	85 - 115
Copper	94.0		P	85 - 115
Lead	95.1		P	85 - 115
Manganese	93.4		P	85 - 115
Molybdenum	95.4		P	85 - 115
Nickel	95.5		P	85 - 115
Selenium	95.1		P	85 - 115
Silver	95.6		P	85 - 115
Thallium	96.8		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P413385

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	98.1		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P413256

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P413258

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P413504

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	94.8		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413273

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413218

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	94.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413288

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413232

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413233

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

Reference Method: EPA 8321B
Batch ID: P412884

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	99.2		P	40 - 150
AMPA	110		P	40 - 150
Endothall	96.3		P	40 - 150
Glufosinate	109		P	40 - 150
Glyphosate	98.2		P	40 - 150
Sucralose	94.0		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P412965

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	70.4		P	40 - 150
2,4,5-T	65.2		P	40 - 150
Acetaminophen	86.4		P	30 - 150
Acetamiprid	68.5		P	40 - 150
Afidopyropen	45.9		P	40 - 150
Bentazon	77.9		P	30 - 150
Benzovindiflupyr	70.4		P	40 - 150
Carbamazepine	62.7		P	40 - 150
Clothianidin	76.3		P	40 - 150
Dinotefuran	102		P	40 - 150
Diuron	74.9		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P412965

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fenuron	89.4		P	40 - 150
Fluridone	68.7		P	40 - 150
Hydrocodone	90.7		P	40 - 150
Ibuprofen	66.1		P	40 - 150
Imazapyr	78.3		P	40 - 150
Imidacloprid	65.2		P	40 - 150
Linuron	65.1		P	40 - 150
Mandestrobin	64.5		P	40 - 150
MCPP	83.0		P	40 - 150
Naproxen	47.6		P	40 - 150
Primidone	79.5		P	40 - 150
Pyraclostrobin	62.4		P	40 - 150
Silvex	75.2		P	40 - 150
Thiamethoxam	76.9		P	40 - 150
Tolfenpyrad	30.4		P	30 - 150
Triclopyr	68.9		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P412970

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	104		P	40 - 150
AMPA	100		P	40 - 150
Endothall	99.1		P	40 - 150
Glufosinate	108		P	40 - 150
Glyphosate	91.1		P	40 - 150
Sucralose	98.4		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P413552

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	95.6		P	94 - 106

Reference Method: SM 4500-F- C-2011

Batch ID: P413555

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	93 - 104

Reference Method: SM 5310 B-2011

Batch ID: P413245

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P413013

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322145	Calcium	98.4		P	80 - 120
2322145	Iron	101	105	P/P	80 - 120
2322145	Magnesium	101	105	P/P	80 - 120
2322145	Potassium	102	104	P/P	80 - 120
2322145	Sodium	100	103	P/P	80 - 120
2322145	Strontium	102	104	P/P	80 - 120
2322145	Tin	102	104	P/P	80 - 120
2322145	Titanium	93.8	94.6	P/P	80 - 120
2322145	Vanadium	97.5	99.5	P/P	80 - 120
2322145	Zinc	101	103	P/P	80 - 120
2322146	Calcium	97.9		P	80 - 120
2322146	Iron	102		P	80 - 120
2322146	Magnesium	102		P	80 - 120
2322146	Potassium	108		P	80 - 120
2322146	Sodium	101		P	80 - 120
2322146	Strontium	101		P	80 - 120
2322146	Tin	101		P	80 - 120
2322146	Titanium	94.7		P	80 - 120
2322146	Vanadium	97.8		P	80 - 120
2322146	Zinc	102		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P413106

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322254	Calcium	103	109	P/P	80 - 120
2322254	Iron	108	109	P/P	80 - 120
2322254	Magnesium	110	111	P/P	80 - 120
2322254	Potassium	104	104	P/P	80 - 120
2322254	Sodium	98.9	103	P/P	80 - 120
2322254	Strontium	97.8	100	P/P	80 - 120
2322254	Tin	97.9	100	P/P	80 - 120
2322254	Titanium	99.8	102	P/P	80 - 120
2322254	Vanadium	94.9	97.3	P/P	80 - 120
2322254	Zinc	99.9	103	P/P	80 - 120
2322580	Calcium	104		P	80 - 120
2322580	Iron	104		P	80 - 120
2322580	Magnesium	106		P	80 - 120
2322580	Potassium	104		P	80 - 120
2322580	Sodium	97.9		P	80 - 120
2322580	Strontium	95.4		P	80 - 120
2322580	Tin	97.1		P	80 - 120
2322580	Titanium	98.2		P	80 - 120
2322580	Vanadium	94.3		P	80 - 120
2322580	Zinc	99.1		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P413013

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322145	Antimony	95.4	99.3	P/P	80 - 120
2322145	Arsenic	98.6	101	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P413013

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322145	Barium	106	107	P/P	80 - 120
2322145	Beryllium	94.9	93.1	P/P	80 - 120
2322145	Boron	103	107	P/P	80 - 120
2322145	Cadmium	99.5	103	P/P	80 - 120
2322145	Chromium	99.8	102	P/P	80 - 120
2322145	Cobalt	100	103	P/P	80 - 120
2322145	Copper	98.4	100	P/P	80 - 120
2322145	Lead	97.8	98.6	P/P	80 - 120
2322145	Manganese	99.1	104	P/P	80 - 120
2322145	Molybdenum	95.3	98.2	P/P	80 - 120
2322145	Nickel	100	103	P/P	80 - 120
2322145	Selenium	96.0	98.1	P/P	80 - 120
2322145	Silver	99.5	101	P/P	80 - 120
2322145	Thallium	101	103	P/P	80 - 120
2322146	Antimony	100		P	80 - 120
2322146	Arsenic	99.2		P	80 - 120
2322146	Barium	106		P	80 - 120
2322146	Beryllium	91.2		P	80 - 120
2322146	Boron	110		P	80 - 120
2322146	Cadmium	103		P	80 - 120
2322146	Chromium	101		P	80 - 120
2322146	Cobalt	99.0		P	80 - 120
2322146	Copper	96.4		P	80 - 120
2322146	Lead	98.7		P	80 - 120
2322146	Manganese	103		P	80 - 120
2322146	Molybdenum	98.4		P	80 - 120
2322146	Nickel	98.7		P	80 - 120
2322146	Selenium	94.6		P	80 - 120
2322146	Silver	101		P	80 - 120
2322146	Thallium	101		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P413106

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322254	Aluminum	95.6	97.7	P/P	80 - 120
2322254	Antimony	96.3	97.2	P/P	80 - 120
2322254	Arsenic	93.8	95.9	P/P	80 - 120
2322254	Barium	97.5	100	P/P	80 - 120
2322254	Beryllium	87.4	92.2	P/P	80 - 120
2322254	Boron	99.4	99.8	P/P	80 - 120
2322254	Cadmium	94.4	97.1	P/P	80 - 120
2322254	Chromium	93.3	95.9	P/P	80 - 120
2322254	Cobalt	92.1	93.7	P/P	80 - 120
2322254	Copper	91.5	93.2	P/P	80 - 120
2322254	Lead	95.9	98.1	P/P	80 - 120
2322254	Manganese	94.6	95.5	P/P	80 - 120
2322254	Molybdenum	95.4	96.9	P/P	80 - 120
2322254	Nickel	93.1	94.8	P/P	80 - 120
2322254	Selenium	93.6	94.2	P/P	80 - 120
2322254	Silver	94.8	95.7	P/P	80 - 120
2322254	Thallium	98.2	102	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P413106

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322580	Aluminum	109		P	80 - 120
2322580	Antimony	95.8		P	80 - 120
2322580	Arsenic	98.4		P	80 - 120
2322580	Barium	102		P	80 - 120
2322580	Beryllium	94.7		P	80 - 120
2322580	Boron	98.1		P	80 - 120
2322580	Cadmium	97.5		P	80 - 120
2322580	Chromium	97.3		P	80 - 120
2322580	Cobalt	96.7		P	80 - 120
2322580	Copper	97.2		P	80 - 120
2322580	Lead	99.0		P	80 - 120
2322580	Manganese	96.0		P	80 - 120
2322580	Molybdenum	98.2		P	80 - 120
2322580	Nickel	98.4		P	80 - 120
2322580	Selenium	96.7		P	80 - 120
2322580	Silver	95.5		P	80 - 120
2322580	Thallium	101		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P413385

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322072	Aluminum	96.6	97.2	P/P	80 - 120
2322183	Aluminum	97.0		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P413256

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322156	Chloride	97.3		P	90 - 110
2322378	Chloride	98.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P413258

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322156	Sulfate	96.2		P	90 - 110
2322378	Sulfate	97.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P413504

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322171	Ammonia-N	97.8	99.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P413273

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322020	Kjeldahl Nitrogen	106		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413218

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322171	NO2NO3-N	91.8		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413288

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322267	NO2NO3-N	97.2	98.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413232

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322171	Total-P	99.5	99.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413233

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322267	Total-P	97.5	98.1	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P412884

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321562	Acesulfame K	95.6	96.3	P/P	40 - 150
2321562	AMPA	106	102	P/P	40 - 150
2321562	Endothall	96.2	95.1	P/P	40 - 150
2321562	Glufosinate	112	93.5	P/P	40 - 150
2321562	Glyphosate	83.0	79.7	P/P	40 - 150
2321562	Sucralose	97.2	95.8	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P412965

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322065	2,4-D	78.8	69.2	P/P	40 - 150
2322065	2,4,5-T	93.2	92.0	P/P	40 - 150
2322065	Acetaminophen	127	125	P/P	30 - 150
2322065	Acetamiprid	40.8	38.6	P/F	40 - 150
2322065	Afidopyropen	44.2	44.3	P/P	40 - 150
2322065	Bentazon	40.4	47.2	P/P	30 - 150
2322065	Benzovindiflupyr	58.7	57.7	P/P	40 - 150
2322065	Carbamazepine	44.2	43.0	P/P	40 - 150
2322065	Clothianidin	41.5	41.7	P/P	40 - 150
2322065	Dinotefuran	104	105	P/P	40 - 150
2322065	Diuron	50.5	49.2	P/P	40 - 150
2322065	Fenuron	58.5	57.9	P/P	40 - 150
2322065	Fluridone	72.4	70.5	P/P	40 - 150
2322065	Hydrocodone	52.4	52.5	P/P	40 - 150
2322065	Ibuprofen	54.9	55.4	P/P	40 - 150
2322065	Imazapyr	74.5	69.8	P/P	40 - 150
2322065	Imidacloprid	51.4	53.5	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P412965

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322065	Linuron	51.5	53.5	P/P	40 - 150
2322065	Mandestrobin	58.9	59.5	P/P	40 - 150
2322065	MCCP	118	118	P/P	40 - 150
2322065	Naproxen	51.5	49.8	P/P	40 - 150
2322065	Primidone	64.5	65.9	P/P	40 - 150
2322065	Pyraclostrobin	67.9	66.0	P/P	40 - 150
2322065	Silvex	96.7	116	P/P	40 - 150
2322065	Thiamethoxam	48.9	48.7	P/P	40 - 150
2322065	Tolfenpyrad	37.6	36.5	P/P	30 - 150
2322065	Triclopyr	86.4	89.6	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P412970

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322221	Acesulfame K	94.5	94.0	P/P	40 - 150
2322221	AMPA	77.8	77.7	P/P	40 - 150
2322221	Endothall	95.5	94.7	P/P	40 - 150
2322221	Glufosinate	91.2	97.9	P/P	40 - 150
2322221	Glyphosate	128	128	P/P	40 - 150
2322221	Sucralose	103	105	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P413555

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322887	Fluoride	101	100	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P413245

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322337	Organic Carbon	99.8	99.7	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P412947

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322170	Color (true)	15.0	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P412998

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322170	Turbidity	14.6	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P413013

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322145	Calcium	0.761	Spike	P	0 - 20
2322145	Iron	3.50	Spike	P	0 - 20
2322145	Magnesium	2.30	Spike	P	0 - 20
2322145	Potassium	1.09	Spike	P	0 - 20
2322145	Sodium	2.23	Spike	P	0 - 20
2322145	Strontium	1.44	Spike	P	0 - 20
2322145	Tin	1.56	Spike	P	0 - 20
2322145	Titanium	0.814	Spike	P	0 - 20
2322145	Vanadium	2.06	Spike	P	0 - 20
2322145	Zinc	1.64	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P413106

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322254	Calcium	3.58	Spike	P	0 - 20
2322254	Iron	0.715	Spike	P	0 - 20
2322254	Magnesium	0.793	Spike	P	0 - 20
2322254	Potassium	0.0786	Spike	P	0 - 20
2322254	Sodium	2.98	Spike	P	0 - 20
2322254	Strontium	2.31	Spike	P	0 - 20
2322254	Tin	2.48	Spike	P	0 - 20
2322254	Titanium	2.61	Spike	P	0 - 20
2322254	Vanadium	2.45	Spike	P	0 - 20
2322254	Zinc	2.77	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P413013

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322145	Antimony	3.99	Spike	P	0 - 20
2322145	Arsenic	2.34	Spike	P	0 - 20
2322145	Barium	0.901	Spike	P	0 - 20
2322145	Beryllium	1.88	Spike	P	0 - 20
2322145	Boron	3.54	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P413013

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322145	Cadmium	3.19	Spike	P	0 - 20
2322145	Chromium	1.75	Spike	P	0 - 20
2322145	Cobalt	2.59	Spike	P	0 - 20
2322145	Copper	1.72	Spike	P	0 - 20
2322145	Lead	0.766	Spike	P	0 - 20
2322145	Manganese	2.27	Spike	P	0 - 20
2322145	Molybdenum	2.95	Spike	P	0 - 20
2322145	Nickel	2.49	Spike	P	0 - 20
2322145	Selenium	2.14	Spike	P	0 - 20
2322145	Silver	1.69	Spike	P	0 - 20
2322145	Thallium	1.47	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P413106

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322254	Aluminum	1.84	Spike	P	0 - 20
2322254	Antimony	0.986	Spike	P	0 - 20
2322254	Arsenic	2.20	Spike	P	0 - 20
2322254	Barium	2.60	Spike	P	0 - 20
2322254	Beryllium	5.15	Spike	P	0 - 20
2322254	Boron	0.421	Spike	P	0 - 20
2322254	Cadmium	2.82	Spike	P	0 - 20
2322254	Chromium	2.82	Spike	P	0 - 20
2322254	Cobalt	1.64	Spike	P	0 - 20
2322254	Copper	1.88	Spike	P	0 - 20
2322254	Lead	2.24	Spike	P	0 - 20
2322254	Manganese	0.800	Spike	P	0 - 20
2322254	Molybdenum	1.65	Spike	P	0 - 20
2322254	Nickel	1.83	Spike	P	0 - 20
2322254	Selenium	0.573	Spike	P	0 - 20
2322254	Silver	0.923	Spike	P	0 - 20
2322254	Thallium	3.62	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P413385

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322072	Aluminum	0.571	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P413256

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322156	Chloride	0.501	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413504

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322171	Ammonia-N	0.817	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413218

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322171	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413288

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322267	NO2NO3-N	1.21	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413232

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322171	Total-P	0.294	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413233

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322267	Total-P	0.418	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P412884

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321562	Acesulfame K	0.663	Spike	P	0 - 30
2321562	AMPA	4.34	Spike	P	0 - 30
2321562	Endothall	1.10	Spike	P	0 - 30
2321562	Glufosinate	18.3	Spike	P	0 - 30
2321562	Glyphosate	4.13	Spike	P	0 - 30
2321562	Sucralose	1.43	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P412965

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322065	2,4-D	9.47	Spike	P	0 - 30
2322065	2,4,5-T	1.30	Spike	P	0 - 30
2322065	Acetaminophen	1.95	Spike	P	0 - 30
2322065	Acetamiprid	5.51	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B

Batch ID: P412965

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322065	Afidopyropen	0.375	Spike	P	0 - 30
2322065	Bentazon	9.58	Spike	P	0 - 30
2322065	Benzovindiflupyr	1.69	Spike	P	0 - 30
2322065	Carbamazepine	2.77	Spike	P	0 - 30
2322065	Clothianidin	0.436	Spike	P	0 - 30
2322065	Dinotefuran	0.497	Spike	P	0 - 30
2322065	Diuron	1.61	Spike	P	0 - 30
2322065	Fenuron	1.11	Spike	P	0 - 30
2322065	Fluridone	2.62	Spike	P	0 - 30
2322065	Hydrocodone	0.237	Spike	P	0 - 30
2322065	Ibuprofen	0.822	Spike	P	0 - 30
2322065	Imazapyr	5.94	Spike	P	0 - 30
2322065	Imidacloprid	3.86	Spike	P	0 - 30
2322065	Linuron	3.80	Spike	P	0 - 30
2322065	Mandestrobin	1.00	Spike	P	0 - 30
2322065	MCPP	0.359	Spike	P	0 - 30
2322065	Naproxen	3.34	Spike	P	0 - 30
2322065	Primidone	2.12	Spike	P	0 - 30
2322065	Pyraclostrobin	2.93	Spike	P	0 - 30
2322065	Silvex	18.1	Spike	P	0 - 30
2322065	Thiamethoxam	0.261	Spike	P	0 - 30
2322065	Tolfenpyrad	3.03	Spike	P	0 - 30
2322065	Triclopyr	3.61	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P412970

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322221	Acesulfame K	0.568	Spike	P	0 - 30
2322221	AMPA	0.111	Spike	P	0 - 30
2322221	Endothall	0.834	Spike	P	0 - 30
2322221	Glufosinate	7.13	Spike	P	0 - 30
2322221	Glyphosate	0.135	Spike	P	0 - 30
2322221	Sucralose	1.36	Spike	P	0 - 30

Reference Method: SM 2320 B-2011

Batch ID: P413552

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322887	Total Alkalinity	1.05	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011

Batch ID: P413421

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321969	TDS	3.66	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 2540 C-2011
Batch ID: P413423

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322293	TDS	4.16	Sample	P	0 - 10

Reference Method: SM 2540 D-2011
Batch ID: P413471

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322293	TSS	7.41	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P413555

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322887	Fluoride	0.498	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P413245

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322337	Organic Carbon	0.0740	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2322180

Field Sample ID: G4NW0481

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	63.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	86.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	49.2	P	30 - 160
EPA 8321B	Diuron-d6	45.9	P	30 - 160
EPA 8321B	Endothall-d6	106	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	89.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	53.9	P	30 - 160
EPA 8321B	Primidone-d5	79.9	P	30 - 160
EPA 8321B	Sucralose-d6	106	P	30 - 160

Lab Sample ID: 2322181

Field Sample ID: G4NW0003

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	65.1	P	30 - 160
EPA 8321B	Acetaminophen-d4	88.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	54.7	P	30 - 160
EPA 8321B	Diuron-d6	50.4	P	30 - 160
EPA 8321B	Endothall-d6	96.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	87.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	54.2	P	30 - 160
EPA 8321B	Primidone-d5	78.0	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160

Lab Sample ID: 2322182

Field Sample ID: G4NW0146

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	75.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	112	P	30 - 160
EPA 8321B	Carbamazepine-d10	47.5	P	30 - 160
EPA 8321B	Diuron-d6	43.1	P	30 - 160
EPA 8321B	Endothall-d6	94.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	81.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	60.2	P	30 - 160
EPA 8321B	Primidone-d5	77.0	P	30 - 160
EPA 8321B	Sucralose-d6	106	P	30 - 160

Lab Sample ID: 2322214

Field Sample ID: FB_04252022

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	56.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	91.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	76.1	P	30 - 160
EPA 8321B	Diuron-d6	85.2	P	30 - 160
EPA 8321B	Endothall-d6	96.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	90.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	69.7	P	30 - 160
EPA 8321B	Primidone-d5	87.7	P	30 - 160
EPA 8321B	Sucralose-d6	97.7	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A111714

Included Lab Sample IDs: 2322170, 2322212

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.1	99.7	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A111740

Included Lab Sample IDs: 2322170, 2322212

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A111841

Included Lab Sample IDs: 2322171

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	94.5	94.0	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A111852

Included Lab Sample IDs: 2322215

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.8	98.3	P/P	90 - 110
Antimony	99.1	99.3	P/P	90 - 110
Arsenic	101	98.9	P/P	90 - 110
Barium	98.9	98.6	P/P	90 - 110
Beryllium	96.3	95.9	P/P	90 - 110
Boron	94.9	95.5	P/P	90 - 110
Cadmium	97.9	97.2	P/P	90 - 110
Chromium	95.1	97.0	P/P	90 - 110
Cobalt	97.6	97.9	P/P	90 - 110
Copper	99.3	98.4	P/P	90 - 110
Lead	96.6	95.8	P/P	90 - 110
Manganese	95.6	96.4	P/P	90 - 110
Molybdenum	98.0	97.8	P/P	90 - 110
Nickel	99.1	99.5	P/P	90 - 110
Selenium	97.6	98.5	P/P	90 - 110
Silver	98.8	98.2	P/P	90 - 110
Thallium	96.3	96.1	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A111856

Included Lab Sample IDs: 2322171, 2322213

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A111858

Included Lab Sample IDs: 2322183, 2322184, 2322185

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	99.4	103	P/P	90 - 110
Arsenic	96.5	98.8	P/P	90 - 110
Barium	98.7	101	P/P	90 - 110
Beryllium	91.1	94.1	P/P	90 - 110
Boron	102	106	P/P	90 - 110
Cadmium	100	102	P/P	90 - 110
Chromium	98.3	102	P/P	90 - 110
Cobalt	96.1	99.3	P/P	90 - 110
Copper	92.8	96.5	P/P	90 - 110
Lead	97.9	99.6	P/P	90 - 110
Manganese	98.3	103	P/P	90 - 110
Molybdenum	93.7	95.9	P/P	90 - 110
Nickel	95.0	98.1	P/P	90 - 110
Selenium	96.8	98.4	P/P	90 - 110
Silver	101	102	P/P	90 - 110
Thallium	95.0	93.9	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A111865

Included Lab Sample IDs: 2322170, 2322212

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.6	99.5	P/P	90 - 110
Sulfate	99.6	99.6	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A111866

Included Lab Sample IDs: 2322180, 2322181, 2322182, 2322214

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	102	102	P/P	60 - 160
Sucralose	97.7	103	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A111868

Included Lab Sample IDs: 2322180, 2322181, 2322182, 2322214

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	111	113	P/P	60 - 160
Endothall	91.0	89.7	P/P	60 - 160
Glufosinate	102	105	P/P	60 - 160
Glyphosate	93.9	91.9	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A111876

Included Lab Sample IDs: 2322180, 2322181, 2322182, 2322214

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	71.5	68.8	P/P	50 - 150
2,4,5-T	80.7	77.0	P/P	50 - 150
Acetaminophen	91.9	91.8	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A111876

Included Lab Sample IDs: 2322180, 2322181, 2322182, 2322214

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetamiprid	109	110	P/P	50 - 150
Afidopyropen	73.5	79.5	P/P	50 - 150
Bentazon	107	111	P/P	50 - 160
Benzovindiflupyr	103	106	P/P	50 - 150
Carbamazepine	101	100	P/P	60 - 150
Clothianidin	94.3	95.0	P/P	60 - 150
Dinotefuran	107	104	P/P	50 - 150
Diuron	110	106	P/P	60 - 160
Fenuron	106	106	P/P	60 - 150
Fluridone	101	101	P/P	60 - 160
Hydrocodone	105	101	P/P	60 - 150
Ibuprofen	94.6	93.1	P/P	50 - 160
Imazapyr	97.2	92.9	P/P	50 - 150
Imidacloprid	101	96.2	P/P	60 - 150
Linuron	109	104	P/P	60 - 150
Mandestrobin	101	101	P/P	50 - 150
MCPP	79.7	83.1	P/P	50 - 150
Naproxen	88.6	75.9	P/P	50 - 160
Primidone	88.1	90.0	P/P	60 - 150
Pyraclostrobin	96.5	95.8	P/P	60 - 150
Silvex	78.6	74.0	P/P	50 - 150
Thiamethoxam	103	100	P/P	50 - 150
Tolfenpyrad	72.7	69.2	P/P	60 - 150
Triclopyr	73.8	76.3	P/P	50 - 150

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A111878

Included Lab Sample IDs: 2322213

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.0	97.0	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A111897

Included Lab Sample IDs: 2322183, 2322184, 2322185

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	97.2	97.9	P/P	90 - 110
Calcium	97.9	98.1	P/P	90 - 110
Iron	100	101	P/P	90 - 110
Iron	99.9	100	P/P	90 - 110
Magnesium	100	101	P/P	90 - 110
Magnesium	99.5	100	P/P	90 - 110
Potassium	100	101	P/P	90 - 110
Potassium	101	101	P/P	90 - 110
Sodium	98.8	99.8	P/P	90 - 110
Sodium	99.8	100	P/P	90 - 110
Strontium	102	99.2	P/P	90 - 110
Strontium	99.3	102	P/P	90 - 110
Tin	100	100	P/P	90 - 110
Tin	100	99.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A111897

Included Lab Sample IDs: 2322183, 2322184, 2322185

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Titanium	102	100	P/P	90 - 110
Titanium	98.0	102	P/P	90 - 110
Vanadium	100	102	P/P	90 - 110
Vanadium	102	100	P/P	90 - 110
Zinc	101	101	P/P	90 - 110
Zinc	99.9	101	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A111908

Included Lab Sample IDs: 2322215

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	102	P/P	90 - 110
Iron	102	104	P/P	90 - 110
Magnesium	102	104	P/P	90 - 110
Potassium	100	101	P/P	90 - 110
Sodium	97.9	99.1	P/P	90 - 110
Strontium	94.9	95.7	P/P	90 - 110
Tin	96.0	96.3	P/P	90 - 110
Titanium	99.1	98.0	P/P	90 - 110
Vanadium	98.9	97.8	P/P	90 - 110
Zinc	99.2	97.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A111944

Included Lab Sample IDs: 2322171, 2322213

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	100	P/P	90 - 110
Total-P	99.2	100	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A111948

Included Lab Sample IDs: 2322183, 2322184, 2322185

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.4	98.6	P/P	90 - 110
Aluminum	98.6	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A111967

Included Lab Sample IDs: 2322171, 2322213

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	96.6	96.8	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A111985

Included Lab Sample IDs: 2322170, 2322212

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

Reference Method: SM 2320 B-2011

Run ID: A111985

Included Lab Sample IDs: 2322170, 2322212

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.8	96.0	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A111985

Included Lab Sample IDs: 2322170, 2322212

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A112015

Included Lab Sample IDs: 2322171, 2322213

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.0	91.1	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)	98.8				15.0	
EPA 180.1 Rev. 2.0	Turbidity	95.9				14.6	
EPA 200.7 Rev. 4.4	Calcium	100	98.4	97.9			0.761
	Calcium	106	103	109	104		3.58
	Iron	104	101	105	102		3.50
	Iron	107	108	109	104		0.715
	Magnesium	103	101	105	102		2.30
	Magnesium	109	110	111	106		0.793
	Potassium	103	102	104	108		1.09
	Potassium	101	104	104	104		0.0786
	Sodium	101	100	103	101		2.23
	Sodium	100	98.9	103	97.9		2.98
	Strontium	101	102	104	101		1.44
	Strontium	94.6	97.8	100	95.4		2.31
	Tin	102	102	104	101		1.56
	Tin	98.6	97.9	100	97.1		2.48
	Titanium	102	94.7	93.8	94.6		0.814
	Titanium	100	99.8	102	98.2		2.61
	Vanadium	95.9	97.5	99.5	97.8		2.06
	Vanadium	94.8	94.9	97.3	94.3		2.45
	Zinc	101	101	103	102		1.64
	Zinc	100	99.9	103	99.1		2.77
EPA 200.8 Rev. 5.4	Aluminum	96.5	109	95.6	97.7		1.84
	Aluminum	98.1	96.6	97.2	97.0		0.571
	Antimony	97.3	95.4	99.3	100		3.99
	Antimony	95.3	95.8	96.3	97.2		0.986
	Arsenic	98.9	98.6	101	99.2		2.34
	Arsenic	96.6	98.4	93.8	95.9		2.20
	Barium	104	106	107	106		0.901
	Barium	99.7	102	97.5	100		2.60
	Beryllium	91.3	94.9	93.1	91.2		1.88
	Beryllium	94.6	94.7	87.4	92.2		5.15
	Boron	103	103	107	110		3.54
	Boron	98.2	98.1	99.4	99.8		0.421
	Cadmium	98.6	99.5	103	103		3.19
	Cadmium	93.1	97.5	94.4	97.1		2.82
	Chromium	98.5	99.8	102	101		1.75
	Chromium	91.9	97.3	93.3	95.9		2.82
	Cobalt	98.9	100	103	99.0		2.59
	Cobalt	94.6	96.7	92.1	93.7		1.64
	Copper	94.7	98.4	100	96.4		1.72
	Copper	94.0	97.2	91.5	93.2		1.88
	Lead	96.5	97.8	98.6	98.7		0.766
	Lead	95.1	99.0	95.9	98.1		2.24
	Manganese	99.4	99.1	104	103		2.27
	Manganese	93.4	96.0	94.6	95.5		0.800
	Molybdenum	96.1	95.3	98.2	98.4		2.95
	Molybdenum	95.4	98.2	95.4	96.9		1.65
	Nickel	97.7	100	103	98.7		2.49
	Nickel	95.5	98.4	93.1	94.8		1.83
	Selenium	96.3	96.0	98.1	94.6		2.14
	Selenium	95.1	96.7	93.6	94.2		0.573
	Silver	99.5	99.5	101	101		1.69
	Silver	95.6	95.5	94.8	95.7		0.923

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision SMP	MS
			LCS				
EPA 200.8 Rev. 5.4	Thallium	97.5	101	103	101		1.47
	Thallium	96.8	101	98.2	102		3.62
EPA 300.0 Rev. 2.1	Chloride	98.0	97.3	98.2		0.501	
	Sulfate	97.6	96.2	97.3			
EPA 350.1 Rev. 2.0	Ammonia-N	94.8	97.8	99.2			0.817
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.0	106				
EPA 353.2 Rev. 2.0	NO2NO3-N	94.0	91.8				0.0
	NO2NO3-N	98.0	97.2	98.7			1.21
EPA 365.1 Rev. 2.0	Total-P	99.7	99.5	99.8			0.294
	Total-P	102	97.5	98.1			0.418
EPA 8321B	2,4-D	70.4	78.8	69.2			9.47
	2,4,5-T	65.2	93.2	92.0			1.30
	Acesulfame K	99.2	95.6	96.3			0.663
	Acesulfame K	104	94.5	94.0			0.568
	Acetaminophen	86.4	127	125			1.95
	Acetamiprid	68.5	40.8	38.6			5.51
	Afidopyropen	45.9	44.2	44.3			0.375
	AMPA	110	106	102			4.34
	AMPA	100	77.8	77.7			0.111
	Bentazon	77.9	40.4	47.2			9.58
	Benzovindiflupyr	70.4	58.7	57.7			1.69
	Carbamazepine	62.7	44.2	43.0			2.77
	Clothianidin	76.3	41.5	41.7			0.436
	Dinotefuran	102	104	105			0.497
	Diuron	74.9	50.5	49.2			1.61
	Endothall	96.3	96.2	95.1			1.10
	Endothall	99.1	95.5	94.7			0.834
	Fenuron	89.4	58.5	57.9			1.11
	Fluridone	68.7	72.4	70.5			2.62
	Glufosinate	109	112	93.5			18.3
	Glufosinate	108	91.2	97.9			7.13
	Glyphosate	98.2	83.0	79.7			4.13
	Glyphosate	91.1	128	128			0.135
	Hydrocodone	90.7	52.4	52.5			0.237
	Ibuprofen	66.1	54.9	55.4			0.822
	Imazapyr	78.3	74.5	69.8			5.94
	Imidacloprid	65.2	51.4	53.5			3.86
	Linuron	65.1	51.5	53.5			3.80
	Mandestrobin	64.5	58.9	59.5			1.00
	MCPP	83.0	118	118			0.359
	Naproxen	47.6	51.5	49.8			3.34
	Primidone	79.5	64.5	65.9			2.12
	Pyraclostrobin	62.4	67.9	66.0			2.93
	Silvex	75.2	96.7	116			18.1
	Sucralose	94.0	97.2	95.8			1.43
	Sucralose	98.4	103	105			1.36
	Thiamethoxam	76.9	48.9	48.7			0.261
	Tolfenpyrad	30.4	37.6	36.5			3.03
	Triclopyr	68.9	86.4	89.6			3.61
SM 2320 B-2011	Total Alkalinity	95.6				1.05	
SM 2540 C-2011	TDS					3.66	
	TDS					4.16	
SM 2540 D-2011	TSS					7.41	
SM 4500-F- C-2011	Fluoride	100	101	100			0.498

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	Precision	MS
				LCS	SMP
SM 5310 B-2011	Organic Carbon	98.4	99.8 99.7		0.0740

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2322170, 2322212
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2322170, 2322212
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2322183, 2322184, 2322185, 2322215
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2322183, 2322184, 2322185, 2322215
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2322170, 2322212
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2322170, 2322212
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2322171, 2322213
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2322171, 2322213
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2322171, 2322213
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2322171, 2322213
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2322180, 2322181, 2322182, 2322214
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2322170, 2322212
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2322183, 2322184, 2322185, 2322215
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2322170, 2322212
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2322170, 2322212
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2322170, 2322212
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2322171, 2322213

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	04/27/2022			04/27/2022 10:14	Samantha L Bates	2322170, 2322212
EPA 180.1 Rev. 2.0	04/27/2022			04/27/2022 10:00	Khloe J Berg	2322170
	04/27/2022			04/27/2022 10:01	Khloe J Berg	2322212
EPA 200.7 Rev. 4.4	04/27/2022	04/28/2022 10:10	Megan Whitefoot	05/03/2022 16:40	Josef B Mick	2322183
	04/27/2022	04/28/2022 10:10	Megan Whitefoot	05/03/2022 16:47	Josef B Mick	2322184
	04/27/2022	04/28/2022 10:10	Megan Whitefoot	05/03/2022 17:24	Josef B Mick	2322185
	04/27/2022	04/29/2022 10:15	Megan Whitefoot	05/03/2022 14:49	McKinley C Carter	2322215
EPA 200.8 Rev. 5.4	04/27/2022	04/28/2022 10:10	Megan Whitefoot	05/02/2022 20:15	Emily M Philpot	2322183
	04/27/2022	04/28/2022 10:10	Megan Whitefoot	05/02/2022 20:24	Emily M Philpot	2322184
	04/27/2022	04/28/2022 10:10	Megan Whitefoot	05/02/2022 20:33	Emily M Philpot	2322185
	04/27/2022	04/29/2022 10:15	Megan Whitefoot	05/02/2022 15:34	Alexander Thompson	2322215
	04/27/2022	05/05/2022 10:00	Megan Whitefoot	05/05/2022 16:49	Emily M Philpot	2322183
	04/27/2022	05/05/2022 10:00	Megan Whitefoot	05/05/2022 17:24	Emily M Philpot	2322184
	04/27/2022	05/05/2022 10:00	Megan Whitefoot	05/05/2022 17:30	Emily M Philpot	2322185
EPA 300.0 Rev. 2.1	04/27/2022			05/02/2022 20:49	James L Waggeberby	2322170
	04/27/2022			05/02/2022 21:13	James L Waggeberby	2322212
EPA 350.1 Rev. 2.0	04/27/2022			05/06/2022 11:36	Ping Hua	2322171
	04/27/2022			05/06/2022 11:49	Ping Hua	2322213
EPA 351.2 Rev. 2.0	04/27/2022	05/04/2022 15:46	Alexandra J Mattheus	05/09/2022 17:46	Samantha L Bates	2322171
	04/27/2022	05/04/2022 15:46	Alexandra J Mattheus	05/09/2022 17:48	Samantha L Bates	2322213
EPA 353.2 Rev. 2.0	04/27/2022			05/02/2022 10:25	Beverly Y. Sanders	2322171
	04/27/2022			05/03/2022 13:26	Nathaniel J Jones	2322213
EPA 365.1 Rev. 2.0	04/27/2022	05/03/2022 16:15	Simonne.V. Calhoun	05/05/2022 14:43	James L Waggeberby	2322171
	04/27/2022	05/03/2022 16:15	Simonne.V. Calhoun	05/05/2022 14:53	James L Waggeberby	2322213
EPA 8321B	04/27/2022	04/27/2022 11:00	Manjita Shrestha	04/27/2022 19:03	Manjita Shrestha	2322180
	04/27/2022	04/27/2022 11:00	Manjita Shrestha	04/27/2022 19:16	Manjita Shrestha	2322181
	04/27/2022	04/27/2022 11:00	Manjita Shrestha	04/27/2022 19:29	Manjita Shrestha	2322182
	04/27/2022	04/27/2022 11:00	Manjita Shrestha	04/28/2022 12:05	Manjita Shrestha	2322180
	04/27/2022	04/27/2022 11:00	Manjita Shrestha	04/28/2022 12:20	Manjita Shrestha	2322181
	04/27/2022	04/27/2022 11:00	Manjita Shrestha	04/28/2022 12:35	Manjita Shrestha	2322182
	04/27/2022	04/27/2022 15:00	Manjita Shrestha	04/27/2022 21:00	Manjita Shrestha	2322214
	04/27/2022	04/27/2022 15:00	Manjita Shrestha	04/28/2022 14:20	Manjita Shrestha	2322214
	04/27/2022	04/28/2022 09:00	Hoor Shaik	04/28/2022 20:50	Juyoung Kim	2322180
	04/27/2022	04/28/2022 09:00	Hoor Shaik	04/28/2022 21:08	Juyoung Kim	2322181
	04/27/2022	04/28/2022 09:00	Hoor Shaik	04/28/2022 21:26	Juyoung Kim	2322182
	04/27/2022	04/28/2022 09:00	Hoor Shaik	04/28/2022 22:02	Juyoung Kim	2322214
SM 2320 B-2011	04/27/2022			05/04/2022 09:28	Dale L. Simmons	2322170
	04/27/2022			05/04/2022 09:53	Dale L. Simmons	2322212
SM 2340 B-2011	04/27/2022			05/03/2022 14:49	McKinley C Carter	2322215
	04/27/2022			05/03/2022 16:40	Josef B Mick	2322183

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2340 B-2011	04/27/2022			05/03/2022 16:47	Josef B Mick	2322184
	04/27/2022			05/03/2022 17:24	Josef B Mick	2322185
SM 2540 C-2011	04/27/2022			04/29/2022 15:42	Yijie Li	2322170, 2322212
SM 2540 D-2011	04/27/2022			04/29/2022 15:42	Yijie Li	2322170, 2322212
SM 4500-F- C-2011	04/27/2022			05/04/2022 09:28	Dale L. Simmons	2322170
	04/27/2022			05/04/2022 09:53	Dale L. Simmons	2322212
SM 5310 B-2011	04/27/2022			05/03/2022 02:31	Khloe J Berg	2322171
	04/27/2022			05/03/2022 03:33	Khloe J Berg	2322213