

Chemical Analysis Report

SE-DIST-2022-05-04-01

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

Event Description: **Port Mayaca 2022**

Request ID: **RQ-2022-05-02-77**

Customer: **SE-DIST**

Project ID: **SMP**

Send Reports to:

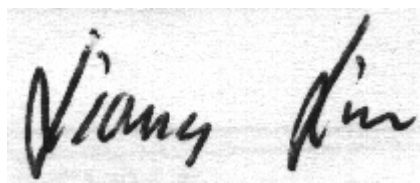
FL Dept. of Environmental Protection
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 27-MAY-2022 09:38

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: Mosquito Creek @ 70

Collection Date/Time: 05/03/2022 08:30

Field ID: G1SE0006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2324127	EPA 8321B	2,4-D	0.0020	U	ug/L	P413414	
		Acesulfame K	0.10	U	ug/L	P413320	
		2,4,5-T	0.0040	U	ug/L	P413414	
		AMPA	0.10	U	ug/L	P413320	
		Acetaminophen	0.0080	U	ug/L	P413414	
		Acetamiprid	0.020	U	ug/L	P413414	
		Endothall	0.25	U	ug/L	P413320	
		Glufosinate	0.10	U	ug/L	P413320	
		Glyphosate	0.10	U	ug/L	P413320	
		Afidopyropen	0.020	U	ug/L	P413414	
		Bentazon	8.0E-04	U	ug/L	P413414	
		Sucralose	0.036	I	ug/L	P413320	
		Benzovindiflupyr	0.020	U	ug/L	P413414	
		Carbamazepine	0.0080	U	ug/L	P413414	
		Clothianidin	0.020	U	ug/L	P413414	
		Dinotefuran	0.020	U	ug/L	P413414	
		Diuron	0.020	U	ug/L	P413414	
		Fenuron	0.32	U	ug/L	P413414	
		Fluridone	0.0080	U	ug/L	P413414	
		Imazapyr	0.030		ug/L	P413414	
		Hydrocodone	0.020	U	ug/L	P413414	
		Ibuprofen	0.020	U	ug/L	P413414	
		Imidacloprid	0.020	U	ug/L	P413414	
		Linuron	0.040	U	ug/L	P413414	
		Mandestrobin	0.020	U	ug/L	P413414	
		MCPP	0.0040	U	ug/L	P413414	
		Naproxen	0.0080	U	ug/L	P413414	
		Primidone	0.0040	U	ug/L	P413414	
		Pyraclostrobin	0.020	U	ug/L	P413414	
		Silvex	0.0040	U	ug/L	P413414	
		Thiamethoxam	0.020	U	ug/L	P413414	
		Tolfenpyrad	0.020	U	ug/L	P413414	
		Triclopyr	0.0040	U	ug/L	P413414	

Ref. Method and Comment:
EPA 8321B: MDL for some parameters elevated due to matrix interference.

Sample Location: Nubbin Slough 1.4 Miles Upstream of 710

Collection Date/Time: 05/03/2022 09:00

Field ID: G1SE0031

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2324125	EPA 8321B	2,4-D	0.0020	U	ug/L	P413414	
		Acesulfame K	0.10	U	ug/L	P413320	
		2,4,5-T	0.0040	U	ug/L	P413414	
		AMPA	0.10	U	ug/L	P413320	
		Acetaminophen	0.0080	U	ug/L	P413414	
		Acetamiprid	0.020	U	ug/L	P413414	
		Endothall	0.25	U	ug/L	P413320	
		Glufosinate	0.10	U	ug/L	P413320	
		Glyphosate	0.10	U	ug/L	P413320	
		Afidopyropen	0.020	U	ug/L	P413414	
		Bentazon	8.0E-04	U	ug/L	P413414	
		Sucralose	0.021	I	ug/L	P413320	
		Benzovindiflupyr	0.020	U	ug/L	P413414	
		Carbamazepine	0.0080	U	ug/L	P413414	
		Clothianidin	0.020	U	ug/L	P413414	
		Dinotefuran	0.020	U	ug/L	P413414	
		Diuron	0.020	U	ug/L	P413414	
		Fenuron	0.32	U	ug/L	P413414	
		Fluridone	0.0080	U	ug/L	P413414	
		Imazapyr	0.017		ug/L	P413414	
		Hydrocodone	0.020	U	ug/L	P413414	
		Ibuprofen	0.020	U	ug/L	P413414	
		Imidacloprid	0.020	U	ug/L	P413414	
		Linuron	0.040	U	ug/L	P413414	
		Mandestrobin	0.020	U	ug/L	P413414	
		MCPP	0.0040	U	ug/L	P413414	
		Naproxen	0.0080	U	ug/L	P413414	
		Primidone	0.0040	U	ug/L	P413414	
		Pyraclostrobin	0.020	U	ug/L	P413414	
		Silvex	0.0040	U	ug/L	P413414	
		Thiamethoxam	0.020	U	ug/L	P413414	
		Tolfenpyrad	0.020	U	ug/L	P413414	
		Triclopyr	0.0040	U	ug/L	P413414	
2324131	EPA 200.7 Rev. 4.4	Calcium	34.9		mg/L	P413386	
		Iron	430		ug/L	P413386	
		Magnesium	6.81		mg/L	P413386	
		Potassium	37.8		mg/L	P413386	
		Sodium	46.5		mg/L	P413386	
		Strontium	212		ug/L	P413386	
		Tin	3.0	U	ug/L	P413386	
		Titanium	1.5	I	ug/L	P413386	
		Vanadium	2.0	U	ug/L	P413386	
		Zinc	5.0	U	ug/L	P413386	
	EPA 200.8 Rev. 5.4	Aluminum	157		ug/L	P413386	

Field ID: G1SE0031

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2324131	EPA 200.8 Rev. 5.4	Antimony	0.060	I	ug/L	P413386	
		Arsenic	0.58		ug/L	P413386	
		Barium	19.6		ug/L	P413386	
		Beryllium	0.010	U	ug/L	P413386	
		Boron**	58.6		ug/L	P413386	
		Cadmium	0.020	U	ug/L	P413386	
		Chromium	0.70	I	ug/L	P413386	
		Cobalt	0.186		ug/L	P413386	
		Copper	0.40	U	ug/L	P413386	
		Lead	0.20	U	ug/L	P413386	
		Manganese	17.7		ug/L	P413386	
		Molybdenum	0.18	I	ug/L	P413386	
		Nickel	0.50	U	ug/L	P413386	
		Selenium	0.23	I	ug/L	P413386	
		Silver	0.010	U	ug/L	P413386	
	SM 2340 B-2011	Thallium	0.10	U	ug/L	P413386	
		Hardness	115		mg/L	P413386	

Ref. Method and Comment:
 EPA 8321B: MDL for some parameters elevated due to matrix interference.

Sample Location: Lettuce Creek @ 710

Collection Date/Time: 05/03/2022 09:45

Field ID: G1SE0015

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2324099	DEP SOP: NU-094-1	Color (true)**	150		PCU	P413371	
	EPA 180.1 Rev. 2.0	Turbidity	2.8		NTU	P413367	
	EPA 300.0 Rev. 2.1	Chloride	60		mg Cl/L	P413788	
		Sulfate	12		mg SO4/L	P413791	
	SM 2320 B-2011	Total Alkalinity	133		mg CaCO3/L	P413665	
	SM 2540 C-2011	TDS	294		mg/L	P413686	
	SM 2540 D-2011	TSS	4	I	mg/L	P413679	
2324100	SM 4500-F- C-2011	Fluoride	0.14		mg F/L	P413667	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.060		mg N/L	P413627	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P413763	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.026		mg N/L	P413630	
	EPA 365.1 Rev. 2.0	Total-P	0.26		mg P/L	P413987	
2324126	SM 5310 B-2011	Organic Carbon	26		mg C/L	P413751	
	EPA 8321B	2,4-D	0.016		ug/L	P413414	
		Acesulfame K	0.10	U	ug/L	P413320	
		2,4,5-T	0.0040	U	ug/L	P413414	
		AMPA	0.15	I	ug/L	P413320	
		Acetaminophen	0.0080	U	ug/L	P413414	
		Acetamiprid	0.020	U	ug/L	P413414	
		Endothall	0.25	U	ug/L	P413320	
		Glufosinate	0.10	U	ug/L	P413320	
		Glyphosate	0.19	I	ug/L	P413320	
		Afidopyropen	0.020	U	ug/L	P413414	
		Bentazon	8.0E-04	U	ug/L	P413414	
		Sucralose	0.014	I	ug/L	P413320	
		Benzovindiflupyr	0.020	U	ug/L	P413414	
		Carbamazepine	0.0080	U	ug/L	P413414	
		Clothianidin	0.020	U	ug/L	P413414	
		Dinotefuran	0.020	U	ug/L	P413414	
		Diuron	0.020	U	ug/L	P413414	
		Fenuron	0.32	U	ug/L	P413414	
		Fluridone	0.0080	U	ug/L	P413414	
		Imazapyr	0.0040	U	ug/L	P413414	
		Hydrocodone	0.020	U	ug/L	P413414	
		Ibuprofen	0.020	U	ug/L	P413414	
		Imidacloprid	0.020	U	ug/L	P413414	
		Linuron	0.040	U	ug/L	P413414	
		Mandestrobin	0.020	U	ug/L	P413414	
		MCP	0.0040	U	ug/L	P413414	
		Naproxen	0.0080	U	ug/L	P413414	
		Primidone	0.0040	U	ug/L	P413414	
		Pyraclostrobin	0.020	U	ug/L	P413414	
		Silvex	0.0040	U	ug/L	P413414	
		Thiamethoxam	0.020	U	ug/L	P413414	

Field ID: G1SE0015

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2324126	EPA 8321B	Tolfenpyrad	0.020	U	ug/L	P413414	
		Triclopyr	0.0040	U	ug/L	P413414	
2324132	EPA 200.7 Rev. 4.4	Calcium	54.3		mg/L	P413386	
		Iron	570		ug/L	P413386	
		Magnesium	7.82		mg/L	P413386	
		Potassium	3.7		mg/L	P413386	
		Sodium	36.3		mg/L	P413386	
		Strontium	581		ug/L	P413386	
		Tin	3.0	U	ug/L	P413386	
		Titanium	1.9	I	ug/L	P413386	
		Vanadium	2.0	U	ug/L	P413386	
		Zinc	5.0	U	ug/L	P413386	
	EPA 200.8 Rev. 5.4	Aluminum	98		ug/L	P413386	
		Antimony	0.050	U	ug/L	P413386	
		Arsenic	0.72		ug/L	P413386	
		Barium	21.5		ug/L	P413386	
		Beryllium	0.010	U	ug/L	P413386	
		Boron**	55.1		ug/L	P413386	
		Cadmium	0.020	U	ug/L	P413386	
		Chromium	0.97	I	ug/L	P413386	
		Cobalt	0.143		ug/L	P413386	
		Copper	0.40	U	ug/L	P413386	
		Lead	0.20	U	ug/L	P413386	
		Manganese	26.8		ug/L	P413386	
		Molybdenum	0.20	I	ug/L	P413386	
		Nickel	0.50	U	ug/L	P413386	
		Selenium	0.23	I	ug/L	P413386	
		Silver	0.010	U	ug/L	P413386	
		Thallium	0.10	U	ug/L	P413386	
	SM 2340 B-2011	Hardness	168		mg/L	P413386	

Ref. Method and Comment:

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

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

Sample Location: L-65 Upstream of S-153

Collection Date/Time: 05/03/2022 10:20

Field ID: G1SE0050

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2324095	DEP SOP: NU-094-1	Color (true)**	83	A	PCU	P413370	
	EPA 180.1 Rev. 2.0	Turbidity	0.90	I	NTU	P413367	
	EPA 300.0 Rev. 2.1	Chloride	160		mg Cl/L	P413788	
		Sulfate	31		mg SO4/L	P413791	
	SM 2320 B-2011	Total Alkalinity	182		mg CaCO3/L	P413665	
	SM 2540 C-2011	TDS	522		mg/L	P413686	
	SM 2540 D-2011	TSS	2	U	mg/L	P413679	
	SM 4500-F- C-2011	Fluoride	0.23		mg F/L	P413667	
2324097	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P413625	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P413792	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P413630	
	EPA 365.1 Rev. 2.0	Total-P	0.061		mg P/L	P413798	
	SM 5310 B-2011	Organic Carbon	22		mg C/L	P413751	
2324128	EPA 200.7 Rev. 4.4	Calcium	80.8		mg/L	P413386	
		Iron	30	U	ug/L	P413386	
		Magnesium	13.5		mg/L	P413386	
		Potassium	6.2		mg/L	P413386	
		Sodium	83.5		mg/L	P413386	
		Strontium	1.69E+03		ug/L	P413386	
		Tin	3.0	U	ug/L	P413386	
		Titanium	1.4	I	ug/L	P413386	
	EPA 200.8 Rev. 5.4	Vanadium	2.0	U	ug/L	P413386	
		Zinc	5.0	U	ug/L	P413386	
		Aluminum	47		ug/L	P413386	
		Antimony	0.057	I	ug/L	P413386	
		Arsenic	1.01		ug/L	P413386	
		Barium	27.3		ug/L	P413386	
		Beryllium	0.010	U	ug/L	P413386	
		Boron**	78.5		ug/L	P413386	
		Cadmium	0.020	U	ug/L	P413386	
		Chromium	0.43	I	ug/L	P413386	
		Cobalt	0.092		ug/L	P413386	
		Copper	0.40	U	ug/L	P413386	
		Lead	0.20	U	ug/L	P413386	
		Manganese	4.50		ug/L	P413386	
		Molybdenum	0.66		ug/L	P413386	
		Nickel	0.50	U	ug/L	P413386	
		Selenium	0.20	I	ug/L	P413386	
		Silver	0.010	U	ug/L	P413386	
		Thallium	0.10	U	ug/L	P413386	
	SM 2340 B-2011	Hardness	257		mg/L	P413386	

Ref. Method and Comment:

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

Sample Location: S-153 Unnamed Creek @ 710

Collection Date/Time: 05/03/2022 11:00

Field ID: G4SE0137

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2324096	DEP SOP: NU-094-1	Color (true)**	57		PCU	P413371	
	EPA 180.1 Rev. 2.0	Turbidity	8.7		NTU	P413367	
	EPA 300.0 Rev. 2.1	Chloride	580		mg Cl/L	P413788	
		Sulfate	270		mg SO4/L	P413791	
	SM 2320 B-2011	Total Alkalinity	91		mg CaCO3/L	P413665	
	SM 2540 C-2011	TDS	1.36E+03		mg/L	P413686	
	SM 2540 D-2011	TSS	42		mg/L	P413679	
2324098	SM 4500-F- C-2011	Fluoride	0.90		mg F/L	P413667	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.033		mg N/L	P413625	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	3.4		mg N/L	P413799	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P413630	
	EPA 365.1 Rev. 2.0	Total-P	0.33	J	mg P/L	P414061	
2324129	SM 5310 B-2011	Organic Carbon	11		mg C/L	P413751	
	EPA 200.7 Rev. 4.4	Calcium	69.1		mg/L	P413386	
		Iron	340		ug/L	P413386	
		Magnesium	67.8		mg/L	P413386	
		Potassium	17.2		mg/L	P413386	
		Sodium	319		mg/L	P413386	
		Strontium	1.51E+04		ug/L	P413386	
		Tin	6.0	U	ug/L	P413386	
		Titanium	2.1	I	ug/L	P413386	
		Vanadium	2.0	U	ug/L	P413386	
		Zinc	19	I	ug/L	P413386	
	EPA 200.8 Rev. 5.4	Aluminum	827		ug/L	P413386	
		Antimony	0.050	U	ug/L	P413386	
		Arsenic	0.48		ug/L	P413386	
		Barium	36.8		ug/L	P413386	
		Beryllium	0.044		ug/L	P413386	
		Boron**	302		ug/L	P413386	
		Cadmium	0.036	I	ug/L	P413386	
		Chromium	0.40	U	ug/L	P413386	
		Cobalt	0.065	I	ug/L	P413386	
		Copper	0.40	U	ug/L	P413386	
		Lead	0.81		ug/L	P413386	
		Manganese	25.3		ug/L	P413386	
		Molybdenum	0.15	U	ug/L	P413386	
		Nickel	0.50	U	ug/L	P413386	
		Selenium	0.20	U	ug/L	P413386	
		Silver	0.010	U	ug/L	P413386	
		Thallium	0.10	U	ug/L	P413386	
	SM 2340 B-2011	Hardness	452		mg/L	P413386	

Ref. Method and Comment:

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

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

EPA 365.1 Rev. 2.0: The sample appears to be heterogeneous with respect to total phosphorus analysis.

Sample Location: Nubbin Slough Upstream of STA

Collection Date/Time: 05/03/2022 09:15

Field ID: G1SE0004

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2324130	EPA 200.7 Rev. 4.4	Calcium	23.1		mg/L	P413386	
		Iron	2.43E+03		ug/L	P413386	
		Magnesium	4.97		mg/L	P413386	
		Potassium	13.6		mg/L	P413386	
		Sodium	25.2		mg/L	P413386	
		Strontium	160		ug/L	P413386	
		Tin	3.0	U	ug/L	P413386	
		Titanium	3.1		ug/L	P413386	
		Vanadium	2.8	I	ug/L	P413386	
		Zinc	5.0	U	ug/L	P413386	
	EPA 200.8 Rev. 5.4	Aluminum	443		ug/L	P413386	
		Antimony	0.050	U	ug/L	P413386	
		Arsenic	1.12		ug/L	P413386	
		Barium	24.6		ug/L	P413386	
		Beryllium	0.031	I	ug/L	P413386	
		Boron**	29.9		ug/L	P413386	
		Cadmium	0.020	U	ug/L	P413386	
		Chromium	1.6	I	ug/L	P413386	
		Cobalt	0.282		ug/L	P413386	
		Copper	0.50	I	ug/L	P413386	
		Lead	0.30	I	ug/L	P413386	
		Manganese	16.5		ug/L	P413386	
		Molybdenum	0.33	I	ug/L	P413386	
		Nickel	0.50	U	ug/L	P413386	
		Selenium	0.24	I	ug/L	P413386	
		Silver	0.010	U	ug/L	P413386	
		Thallium	0.10	U	ug/L	P413386	
	SM 2340 B-2011	Hardness	78.2		mg/L	P413386	

Quality Assurance Report

Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P413370

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P413371

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P413367

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P413386

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: P413386

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413788

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413791

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413625

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413627

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413763

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413792

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413799

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413630

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413798

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413987

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414061

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

Reference Method: EPA 8321B
Batch ID: P413320

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: P413414

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
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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P413665

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

Reference Method: SM 2540 C-2011
Batch ID: P413686

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P413679

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P413667

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P413751

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: P413370

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.8		P	85 - 115

Reference Method: DEP SOP: NU-094-1
Batch ID: P413371

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P413367

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	96.1		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P413386

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	103		P	85 - 115
Iron	104		P	85 - 115
Magnesium	100		P	85 - 115
Potassium	104		P	85 - 115
Sodium	99.9		P	85 - 115
Strontium	103		P	85 - 115
Tin	103		P	85 - 115
Titanium	103		P	85 - 115
Vanadium	96.7		P	85 - 115
Zinc	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P413386

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	98.9		P	85 - 115
Antimony	98.6		P	85 - 115
Arsenic	99.4		P	85 - 115
Barium	103		P	85 - 115
Beryllium	94.4		P	85 - 115
Boron	98.7		P	85 - 115
Cadmium	96.7		P	85 - 115
Chromium	97.5		P	85 - 115
Cobalt	99.1		P	85 - 115
Copper	97.7		P	85 - 115
Lead	98.4		P	85 - 115
Manganese	98.3		P	85 - 115
Molybdenum	98.9		P	85 - 115
Nickel	98.9		P	85 - 115
Selenium	99.5		P	85 - 115
Silver	96.6		P	85 - 115
Thallium	101		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413788

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413791

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413625

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413627

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413763

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413799

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413630

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413798

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413987

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P414061

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

Reference Method: EPA 8321B

Batch ID: P413320

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	112		P	40 - 150
AMPA	90.6		P	40 - 150
Endothall	102		P	40 - 150
Glufosinate	93.5		P	40 - 150
Glyphosate	92.3		P	40 - 150
Sucralose	100		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P413414

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	92.4		P	40 - 150
2,4,5-T	90.3		P	40 - 150
Acetaminophen	82.1		P	30 - 150
Acetamiprid	77.2		P	40 - 150
Afidopyropen	68.5		P	30 - 150
Bentazon	106		P	30 - 150
Benzovindiflupyr	82.5		P	40 - 150
Carbamazepine	79.2		P	40 - 150
Clothianidin	111		P	40 - 150
Dinotefuran	115		P	40 - 150
Diuron	89.4		P	40 - 150
Fenuron	112		P	40 - 150
Fluridone	81.2		P	40 - 150
Hydrocodone	99.8		P	40 - 150
Ibuprofen	78.3		P	40 - 150
Imazapyr	111		P	40 - 150
Imidacloprid	96.8		P	40 - 150
Linuron	73.6		P	40 - 150
Mandestrobin	79.2		P	40 - 150
MCPP	135		P	40 - 150
Naproxen	61.1		P	40 - 150
Primidone	108		P	40 - 150
Pyraclostrobin	73.5		P	40 - 150
Silvex	105		P	40 - 150
Thiamethoxam	100		P	40 - 150
Tolfenpyrad	57.2		P	30 - 150
Triclopyr	94.9		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P413665

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.5		P	94 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P413667

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.2		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P413751

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P413386

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2323733	Calcium	97.7		P	80 - 120
2323733	Iron	103		P	80 - 120
2323733	Magnesium	99.2		P	80 - 120
2323733	Potassium	100		P	80 - 120
2323733	Sodium	97.0		P	80 - 120
2323733	Strontium	100		P	80 - 120
2323733	Tin	99.4		P	80 - 120
2323733	Titanium	102		P	80 - 120
2323733	Vanadium	98.0		P	80 - 120
2323733	Zinc	103		P	80 - 120
2324070	Calcium	95.5		P	80 - 120
2324070	Iron	105	103	P/P	80 - 120
2324070	Magnesium	96.5		P	80 - 120
2324070	Potassium	105	102	P/P	80 - 120
2324070	Sodium	96.1		P	80 - 120
2324070	Strontium	106	104	P/P	80 - 120
2324070	Tin	106	102	P/P	80 - 120
2324070	Titanium	105	103	P/P	80 - 120
2324070	Vanadium	101	98.9	P/P	80 - 120
2324070	Zinc	105	103	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P413386

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2323733	Aluminum	95.3		P	80 - 120
2323733	Antimony	101		P	80 - 120
2323733	Arsenic	97.8		P	80 - 120
2323733	Barium	102		P	80 - 120
2323733	Beryllium	90.1		P	80 - 120
2323733	Boron	97.9		P	80 - 120
2323733	Cadmium	98.7		P	80 - 120
2323733	Chromium	99.4		P	80 - 120
2323733	Cobalt	95.4		P	80 - 120
2323733	Copper	93.8		P	80 - 120
2323733	Lead	98.6		P	80 - 120
2323733	Manganese	99.4		P	80 - 120
2323733	Molybdenum	102		P	80 - 120
2323733	Nickel	96.0		P	80 - 120
2323733	Selenium	95.6		P	80 - 120
2323733	Silver	94.8		P	80 - 120
2323733	Thallium	104		P	80 - 120
2324070	Aluminum	95.2	95.9	P/P	80 - 120
2324070	Antimony	101	102	P/P	80 - 120
2324070	Arsenic	98.9	99.1	P/P	80 - 120
2324070	Barium	103	104	P/P	80 - 120
2324070	Beryllium	94.6	93.4	P/P	80 - 120
2324070	Boron	98.8	99.5	P/P	80 - 120
2324070	Cadmium	101	101	P/P	80 - 120
2324070	Chromium	99.0	99.5	P/P	80 - 120
2324070	Cobalt	97.1	96.7	P/P	80 - 120
2324070	Copper	93.4	93.7	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P413386

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324070	Lead	97.8	98.4	P/P	80 - 120
2324070	Manganese	98.8	100	P/P	80 - 120
2324070	Molybdenum	101	103	P/P	80 - 120
2324070	Nickel	97.3	97.0	P/P	80 - 120
2324070	Selenium	97.3	97.5	P/P	80 - 120
2324070	Silver	96.0	97.5	P/P	80 - 120
2324070	Thallium	103	103	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413788

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2323941	Chloride	99.5		P	90 - 110
2324142	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413791

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2323941	Sulfate	96.8		P	90 - 110
2324142	Sulfate	98.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413625

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324065	Ammonia-N	94.4	98.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413627

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324143	Ammonia-N	94.8	95.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413763

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2323723	Kjeldahl Nitrogen	96.3	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413792

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324144	Kjeldahl Nitrogen	86.8	94.9	F/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413630

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324088	NO2NO3-N	99.0	99.5	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413798

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324110	Total-P	102	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413987

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2326079	Total-P	107	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414061

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327759	Total-P	105	104	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P413320

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2323843	Acesulfame K	90.5	90.4	P/P	40 - 150
2323843	AMPA	67.5	65.9	P/P	40 - 150
2323843	Endothall	89.8	91.7	P/P	40 - 150
2323843	Glufosinate	71.3	76.7	P/P	40 - 150
2323843	Glyphosate	61.3	69.4	P/P	40 - 150
2323843	Sucralose	86.2	92.9	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P413414

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324068	2,4-D	84.2	96.0	P/P	40 - 150
2324068	2,4,5-T	68.8	91.7	P/P	40 - 150
2324068	Acetaminophen	102	103	P/P	30 - 150
2324068	Acetamiprid	62.2	71.7	P/P	40 - 150
2324068	Afidopyropen	60.6	68.9	P/P	30 - 150
2324068	Bentazon	109	126	P/P	30 - 150
2324068	Benzovindiflupyr	79.4	78.6	P/P	40 - 150
2324068	Carbamazepine	82.3	86.6	P/P	40 - 150
2324068	Clothianidin	105	112	P/P	40 - 150
2324068	Dinotefuran	115	121	P/P	40 - 150
2324068	Diuron	79.9	85.8	P/P	40 - 150
2324068	Fenuron	106	101	P/P	40 - 150
2324068	Fluridone	73.7	82.0	P/P	40 - 150
2324068	Hydrocodone	96.3	99.3	P/P	40 - 150
2324068	Ibuprofen	63.8	62.5	P/P	40 - 150
2324068	Imazapyr	128	132	P/P	40 - 150
2324068	Imidacloprid	92.5	102	P/P	40 - 150
2324068	Linuron	64.9	77.2	P/P	40 - 150
2324068	Mandestrobin	72.4	77.1	P/P	40 - 150
2324068	MCPP	121	145	P/P	40 - 150
2324068	Naproxen	53.8	70.7	P/P	40 - 150
2324068	Primidone	105	119	P/P	40 - 150
2324068	Pyraclostrobin	74.1	70.8	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P413414

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324068	Silvex	83.0	92.9	P/P	40 - 150
2324068	Thiamethoxam	91.1	96.8	P/P	40 - 150
2324068	Tolfenpyrad	60.8	55.8	P/P	30 - 150
2324068	Triclopyr	79.9	96.2	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P413667

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324139	Fluoride	99.9	98.7	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P413751

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2323943	Organic Carbon	96.2	96.9	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P413370

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324095	Color (true)	0.436	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P413371

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324149	Color (true)	0.158	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P413367

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2323909	Turbidity	1.03	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P413386

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324070	Calcium	0.626	Spike	P	0 - 20
2324070	Iron	1.69	Spike	P	0 - 20
2324070	Magnesium	0.0269	Spike	P	0 - 20
2324070	Potassium	1.89	Spike	P	0 - 20
2324070	Sodium	0.243	Spike	P	0 - 20
2324070	Strontium	1.49	Spike	P	0 - 20
2324070	Tin	4.19	Spike	P	0 - 20
2324070	Titanium	2.36	Spike	P	0 - 20
2324070	Vanadium	1.65	Spike	P	0 - 20
2324070	Zinc	2.16	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P413386

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324070	Aluminum	0.809	Spike	P	0 - 20
2324070	Antimony	1.06	Spike	P	0 - 20
2324070	Arsenic	0.233	Spike	P	0 - 20
2324070	Barium	0.711	Spike	P	0 - 20
2324070	Beryllium	1.27	Spike	P	0 - 20
2324070	Boron	0.598	Spike	P	0 - 20
2324070	Cadmium	0.105	Spike	P	0 - 20
2324070	Chromium	0.471	Spike	P	0 - 20
2324070	Cobalt	0.434	Spike	P	0 - 20
2324070	Copper	0.371	Spike	P	0 - 20
2324070	Lead	0.658	Spike	P	0 - 20
2324070	Manganese	1.66	Spike	P	0 - 20
2324070	Molybdenum	1.35	Spike	P	0 - 20
2324070	Nickel	0.322	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P413386

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324070	Selenium	0.205	Spike	P	0 - 20
2324070	Silver	1.51	Spike	P	0 - 20
2324070	Thallium	0.293	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413788

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2323941	Chloride	0.233	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413791

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2323941	Sulfate	0.116	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413625

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324065	Ammonia-N	3.40	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413627

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324143	Ammonia-N	0.910	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413763

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2323723	Kjeldahl Nitrogen	3.93	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413792

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324144	Kjeldahl Nitrogen	8.93	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413799

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413799

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324098	Kjeldahl Nitrogen	7.73	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413630

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324088	NO2NO3-N	0.504	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413798

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324110	Total-P	2.85	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413987

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2326079	Total-P	0.702	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414061

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327759	Total-P	0.518	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P413320

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2323843	Acesulfame K	0.121	Spike	P	0 - 30
2323843	AMPA	1.75	Spike	P	0 - 30
2323843	Endothall	2.12	Spike	P	0 - 30
2323843	Glufosinate	7.35	Spike	P	0 - 30
2323843	Glyphosate	6.14	Spike	P	0 - 30
2323843	Sucralose	3.19	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P413414

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324068	2,4-D	13.0	Spike	P	0 - 30
2324068	2,4,5-T	28.6	Spike	P	0 - 30
2324068	Acetaminophen	1.40	Spike	P	0 - 30
2324068	Acetamidrid	14.2	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B

Batch ID: P413414

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324068	Afidopyropen	12.9	Spike	P	0 - 30
2324068	Bentazon	14.7	Spike	P	0 - 30
2324068	Benzovindiflupyr	0.962	Spike	P	0 - 30
2324068	Carbamazepine	5.08	Spike	P	0 - 30
2324068	Clothianidin	6.83	Spike	P	0 - 30
2324068	Dinotefuran	4.96	Spike	P	0 - 30
2324068	Diuron	7.12	Spike	P	0 - 30
2324068	Fenuron	4.80	Spike	P	0 - 30
2324068	Fluridone	10.6	Spike	P	0 - 30
2324068	Hydrocodone	3.10	Spike	P	0 - 30
2324068	Ibuprofen	2.02	Spike	P	0 - 30
2324068	Imazapyr	3.26	Spike	P	0 - 30
2324068	Imidacloprid	10.2	Spike	P	0 - 30
2324068	Linuron	17.2	Spike	P	0 - 30
2324068	Mandestrobin	6.28	Spike	P	0 - 30
2324068	MCPP	18.2	Spike	P	0 - 30
2324068	Naproxen	27.1	Spike	P	0 - 30
2324068	Primidone	12.2	Spike	P	0 - 30
2324068	Pyraclostrobin	4.52	Spike	P	0 - 30
2324068	Silvex	11.2	Spike	P	0 - 30
2324068	Thiamethoxam	6.03	Spike	P	0 - 30
2324068	Tolfenpyrad	8.45	Spike	P	0 - 30
2324068	Triclopyr	18.6	Spike	P	0 - 30

Reference Method: SM 2320 B-2011

Batch ID: P413665

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324139	Total Alkalinity	0.0848	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011

Batch ID: P413686

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324087	TDS	2.92	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011

Batch ID: P413667

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324139	Fluoride	1.03	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011

Batch ID: P413751

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2323943	Organic Carbon	0.403	Spike	P	0 - 20

Quality Assurance Report Precision

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

Quality Assurance Report Surrogates

Lab Sample ID: 2324125
Field Sample ID: G1SE0031

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	70.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	125	P	30 - 160
EPA 8321B	Carbamazepine-d10	84.2	P	30 - 160
EPA 8321B	Diuron-d6	68.8	P	30 - 160
EPA 8321B	Endothall-d6	91.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	75.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	82.5	P	30 - 160
EPA 8321B	Primidone-d5	47.1	P	30 - 160
EPA 8321B	Sucralose-d6	108	P	30 - 160

Lab Sample ID: 2324126
Field Sample ID: G1SE0015

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	72.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	121	P	30 - 160
EPA 8321B	Carbamazepine-d10	83.1	P	30 - 160
EPA 8321B	Diuron-d6	71.3	P	30 - 160
EPA 8321B	Endothall-d6	94.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	77.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	77.4	P	30 - 160
EPA 8321B	Primidone-d5	46.5	P	30 - 160
EPA 8321B	Sucralose-d6	108	P	30 - 160

Lab Sample ID: 2324127
Field Sample ID: G1SE0006

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	63.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	87.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	69.7	P	30 - 160
EPA 8321B	Diuron-d6	55.3	P	30 - 160
EPA 8321B	Endothall-d6	90.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	72.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	73.9	P	30 - 160
EPA 8321B	Primidone-d5	33.6	P	30 - 160
EPA 8321B	Sucralose-d6	37.1	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A111912

Included Lab Sample IDs: 2324095, 2324096, 2324099

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

Reference Method: DEP SOP: NU-094-1

Run ID: A111913

Included Lab Sample IDs: 2324095, 2324096, 2324099

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A111947

Included Lab Sample IDs: 2324128, 2324129, 2324130, 2324131, 2324132

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.7	96.4	P/P	90 - 110
Antimony	101	100	P/P	90 - 110
Arsenic	96.8	97.2	P/P	90 - 110
Barium	99.5	98.3	P/P	90 - 110
Beryllium	94.2	94.8	P/P	90 - 110
Boron	97.1	93.8	P/P	90 - 110
Cadmium	99.8	98.7	P/P	90 - 110
Chromium	99.0	97.4	P/P	90 - 110
Cobalt	94.8	94.7	P/P	90 - 110
Copper	95.4	95.8	P/P	90 - 110
Lead	95.8	95.6	P/P	90 - 110
Manganese	99.4	98.0	P/P	90 - 110
Molybdenum	97.4	97.1	P/P	90 - 110
Nickel	95.5	95.4	P/P	90 - 110
Selenium	99.5	99.4	P/P	90 - 110
Silver	98.7	98.2	P/P	90 - 110
Thallium	96.6	95.2	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A111975

Included Lab Sample IDs: 2324125, 2324126, 2324127

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	109	112	P/P	60 - 160
Sucralose	98.3	99.7	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A111978

Included Lab Sample IDs: 2324125, 2324126, 2324127

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	88.0	92.2	P/P	60 - 160
Endothall	96.3	94.8	P/P	60 - 160
Glufosinate	95.2	91.7	P/P	60 - 160
Glyphosate	95.3	93.6	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A111983

Included Lab Sample IDs: 2324128, 2324129, 2324130, 2324131, 2324132

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	100	101	P/P	90 - 110
Calcium	101	100	P/P	90 - 110
Iron	100	102	P/P	90 - 110
Iron	101	100	P/P	90 - 110
Magnesium	101	102	P/P	90 - 110
Magnesium	101	101	P/P	90 - 110
Potassium	100	101	P/P	90 - 110
Potassium	98.9	100	P/P	90 - 110
Sodium	98.4	98.8	P/P	90 - 110
Sodium	98.8	100	P/P	90 - 110
Strontium	101	103	P/P	90 - 110
Strontium	103	103	P/P	90 - 110
Tin	102	103	P/P	90 - 110
Tin	99.9	102	P/P	90 - 110
Titanium	101	102	P/P	90 - 110
Titanium	99.9	101	P/P	90 - 110
Vanadium	102	102	P/P	90 - 110
Vanadium	102	103	P/P	90 - 110
Zinc	101	105	P/P	90 - 110
Zinc	105	105	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A112012

Included Lab Sample IDs: 2324129, 2324131

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Potassium	98.7	99.8	P/P	90 - 110
Sodium	98.5	99.7	P/P	90 - 110
Tin	103	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A112023

Included Lab Sample IDs: 2324097, 2324098, 2324100

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A112028

Included Lab Sample IDs: 2324097, 2324098, 2324100

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.6	97.6	P/P	90 - 110
Ammonia-N	97.7	98.2	P/P	90 - 110
Ammonia-N	97.9	97.6	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A112048

Included Lab Sample IDs: 2324095, 2324096, 2324099

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: A112048

Included Lab Sample IDs: 2324095, 2324096, 2324099

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.4	98.9	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A112048

Included Lab Sample IDs: 2324095, 2324096, 2324099

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

Reference Method: SM 5310 B-2011

Run ID: A112089

Included Lab Sample IDs: 2324097, 2324098, 2324100

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.0	98.0	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A112115

Included Lab Sample IDs: 2324095, 2324096, 2324099

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	103	P/P	90 - 110
Sulfate	100	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A112172

Included Lab Sample IDs: 2324125, 2324126, 2324127

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	113	118	P/P	50 - 150
2,4,5-T	122	125	P/P	50 - 150
Acetaminophen	128	129	P/P	60 - 160
Acetamiprid	118	122	P/P	50 - 150
Afidopyropen	104	131	P/P	50 - 150
Bentazon	135	118	P/P	50 - 160
Benzovindiflupyr	125	127	P/P	50 - 150
Carbamazepine	122	124	P/P	60 - 150
Clothianidin	130	128	P/P	60 - 150
Dinotefuran	117	117	P/P	50 - 150
Diuron	124	126	P/P	60 - 160
Fenuron	115	114	P/P	60 - 150
Fluridone	109	115	P/P	60 - 160
Hydrocodone	119	120	P/P	60 - 150
Ibuprofen	97.2	94.9	P/P	50 - 160
Imazapyr	120	132	P/P	50 - 150
Imidacloprid	135	140	P/P	60 - 150
Linuron	121	113	P/P	60 - 150
Mandestrobin	104	116	P/P	50 - 150
MCPP	124	127	P/P	50 - 150
Naproxen	108	95.2	P/P	50 - 160
Primidone	122	122	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A112172

Included Lab Sample IDs: 2324125, 2324126, 2324127

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	103	116	P/P	60 - 150
Silvex	139	139	P/P	50 - 150
Thiamethoxam	136	129	P/P	50 - 150
Tolfenpyrad	124	137	P/P	60 - 150
Triclopyr	117	145	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A112182

Included Lab Sample IDs: 2324097

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.4	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A112206

Included Lab Sample IDs: 2324100

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.2	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A112237

Included Lab Sample IDs: 2324097, 2324098

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	96.2	P/P	90 - 110
Kjeldahl Nitrogen	91.5	94.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A112285

Included Lab Sample IDs: 2324100

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.0	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A112335

Included Lab Sample IDs: 2324098

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	101	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)	99.8				0.436	
	Color (true)	101				0.158	
EPA 180.1 Rev. 2.0	Turbidity	96.1				1.03	
EPA 200.7 Rev. 4.4	Calcium	103	97.7	95.5			0.626
	Iron	104	103	105	103		1.69
	Magnesium	100	99.2	96.5			0.0269
	Potassium	104	100	105	102		1.89
	Sodium	99.9	97.0	96.1			0.243
	Strontium	103	100	106	104		1.49
	Tin	103	99.4	106	102		4.19
	Titanium	103	102	105	103		2.36
	Vanadium	96.7	98.0	101	98.9		1.65
	Zinc	103	103	105	103		2.16
EPA 200.8 Rev. 5.4	Aluminum	98.9	95.2	95.9	95.3		0.809
	Antimony	98.6	101	102	101		1.06
	Arsenic	99.4	98.9	99.1	97.8		0.233
	Barium	103	103	104	102		0.711
	Beryllium	94.4	94.6	93.4	90.1		1.27
	Boron	98.7	98.8	99.5	97.9		0.598
	Cadmium	96.7	101	101	98.7		0.105
	Chromium	97.5	99.0	99.5	99.4		0.471
	Cobalt	99.1	97.1	96.7	95.4		0.434
	Copper	97.7	93.4	93.7	93.8		0.371
	Lead	98.4	97.8	98.4	98.6		0.658
	Manganese	98.3	98.8	100	99.4		1.66
	Molybdenum	98.9	101	103	102		1.35
	Nickel	98.9	97.3	97.0	96.0		0.322
	Selenium	99.5	97.3	97.5	95.6		0.205
	Silver	96.6	96.0	97.5	94.8		1.51
	Thallium	101	103	103	104		0.293
EPA 300.0 Rev. 2.1	Chloride	104	99.5	102		0.233	
	Sulfate	99.6	96.8	98.2		0.116	
EPA 350.1 Rev. 2.0	Ammonia-N	96.4	94.4	98.0			3.40
	Ammonia-N	97.6	94.8	95.8			0.910
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	96.3	102			3.93
	Kjeldahl Nitrogen		86.8	94.9			8.93
	Kjeldahl Nitrogen	104					7.73
EPA 353.2 Rev. 2.0	NO2NO3-N	100	99.0	99.5			0.504
EPA 365.1 Rev. 2.0	Total-P	104	102	106			2.85
	Total-P	101	107	106			0.702
	Total-P	104	105	104			0.518
EPA 8321B	2,4-D	92.4	84.2	96.0			13.0
	2,4,5-T	90.3	68.8	91.7			28.6
	Acesulfame K	112	90.5	90.4			0.121
	Acetaminophen	82.1	102	103			1.40
	Acetamiprid	77.2	62.2	71.7			14.2
	Afidopyropen	68.5	60.6	68.9			12.9
	AMPA	90.6	67.5	65.9			1.75
	Bentazon	106	109	126			14.7
	Benzovindiflupyr	82.5	79.4	78.6			0.962
	Carbamazepine	79.2	82.3	86.6			5.08
	Clothianidin	111	105	112			6.83
	Dinotefuran	115	115	121			4.96
	Diuron	89.4	79.9	85.8			7.12

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
			LCS	SMP	MS	
EPA 8321B	Endothall	102	89.8	91.7		2.12
	Fenuron	112	106	101		4.80
	Fluridone	81.2	73.7	82.0		10.6
	Glufosinate	93.5	71.3	76.7		7.35
	Glyphosate	92.3	61.3	69.4		6.14
	Hydrocodone	99.8	96.3	99.3		3.10
	Ibuprofen	78.3	62.5	63.8		2.02
	Imazapyr	111	128	132		3.26
	Imidacloprid	96.8	92.5	102		10.2
	Linuron	73.6	64.9	77.2		17.2
	Mandestrobin	79.2	72.4	77.1		6.28
	MCPP	135	121	145		18.2
	Naproxen	61.1	53.8	70.7		27.1
	Primidone	108	105	119		12.2
	Pyraclostrobin	73.5	74.1	70.8		4.52
	Silvex	105	83.0	92.9		11.2
	Sucralose	100	86.2	92.9		3.19
	Thiamethoxam	100	91.1	96.8		6.03
	Tolfenpyrad	57.2	60.8	55.8		8.45
	Triclopyr	94.9	79.9	96.2		18.6
SM 2320 B-2011	Total Alkalinity	99.5			0.0848	
SM 2540 C-2011	TDS				2.92	
SM 4500-F- C-2011	Fluoride	98.2	99.9	98.7		1.03
SM 5310 B-2011	Organic Carbon	97.6	96.2	96.9		0.403

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2324095, 2324096, 2324099
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2324095, 2324096, 2324099
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2324128, 2324129, 2324130, 2324131, 2324132
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2324128, 2324129, 2324130, 2324131, 2324132
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2324095, 2324096, 2324099
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2324095, 2324096, 2324099
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2324097, 2324098, 2324100
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2324097, 2324098, 2324100
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2324097, 2324098, 2324100
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2324097, 2324098, 2324100
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2324125, 2324126, 2324127
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2324095, 2324096, 2324099
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2324128, 2324129, 2324130, 2324131, 2324132
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2324095, 2324096, 2324099
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2324095, 2324096, 2324099
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2324095, 2324096, 2324099
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2324097, 2324098, 2324100

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	05/04/2022			05/04/2022 15:58	Samantha L Bates	2324095
	05/04/2022			05/04/2022 16:01	Samantha L Bates	2324096
	05/04/2022			05/04/2022 16:02	Samantha L Bates	2324099
EPA 180.1 Rev. 2.0	05/04/2022			05/04/2022 13:55	Anna M. Plaviak	2324095
	05/04/2022			05/04/2022 13:57	Anna M. Plaviak	2324096
	05/04/2022			05/04/2022 13:58	Anna M. Plaviak	2324099
EPA 200.7 Rev. 4.4	05/04/2022	05/05/2022 10:30	Megan Whitefoot	05/06/2022 18:16	McKinley C Carter	2324128
	05/04/2022	05/05/2022 10:30	Megan Whitefoot	05/06/2022 18:23	McKinley C Carter	2324129
	05/04/2022	05/05/2022 10:30	Megan Whitefoot	05/06/2022 18:31	McKinley C Carter	2324130
	05/04/2022	05/05/2022 10:30	Megan Whitefoot	05/06/2022 18:39	McKinley C Carter	2324131
	05/04/2022	05/05/2022 10:30	Megan Whitefoot	05/06/2022 19:18	McKinley C Carter	2324132
	05/04/2022	05/05/2022 10:30	Megan Whitefoot	05/09/2022 20:17	McKinley C Carter	2324131
EPA 200.8 Rev. 5.4	05/04/2022	05/05/2022 10:30	Megan Whitefoot	05/09/2022 20:25	McKinley C Carter	2324129
	05/04/2022	05/05/2022 10:30	Megan Whitefoot	05/05/2022 20:09	Alexander Thompson	2324128
	05/04/2022	05/05/2022 10:30	Megan Whitefoot	05/05/2022 20:19	Alexander Thompson	2324129
	05/04/2022	05/05/2022 10:30	Megan Whitefoot	05/05/2022 20:28	Alexander Thompson	2324130
	05/04/2022	05/05/2022 10:30	Megan Whitefoot	05/05/2022 20:38	Alexander Thompson	2324131
EPA 300.0 Rev. 2.1	05/04/2022	05/05/2022 10:30	Megan Whitefoot	05/05/2022 20:48	Alexander Thompson	2324132
	05/04/2022			05/13/2022 02:24	Anna M. Plaviak	2324095
	05/04/2022			05/13/2022 02:36	Anna M. Plaviak	2324096
	05/04/2022			05/13/2022 02:49	Anna M. Plaviak	2324099
EPA 350.1 Rev. 2.0	05/04/2022			05/10/2022 11:11	Ping Hua	2324097
	05/04/2022			05/10/2022 11:58	Ping Hua	2324100
	05/04/2022			05/10/2022 12:54	Ping Hua	2324098
EPA 351.2 Rev. 2.0	05/04/2022	05/13/2022 09:42	Samantha L Bates	05/17/2022 12:17	Samantha L Bates	2324100
	05/04/2022	05/16/2022 11:34	Samantha L Bates	05/18/2022 15:00	Samantha L Bates	2324097
	05/04/2022	05/16/2022 11:35	Samantha L Bates	05/18/2022 16:14	Samantha L Bates	2324098
EPA 353.2 Rev. 2.0	05/04/2022			05/10/2022 10:33	Beverly Y. Sanders	2324097
	05/04/2022			05/10/2022 10:34	Beverly Y. Sanders	2324098
	05/04/2022			05/10/2022 10:35	Beverly Y. Sanders	2324100
EPA 365.1 Rev. 2.0	05/04/2022	05/13/2022 15:36	Adam P Silver	05/16/2022 13:30	James L Waggerby	2324097
	05/04/2022	05/18/2022 16:09	Simonne.V. Calhoun	05/19/2022 17:34	Sarah A Nixon	2324100
	05/04/2022	05/20/2022 15:00	Simonne.V. Calhoun	05/23/2022 13:12	Sarah A Nixon	2324098
EPA 8321B	05/04/2022	05/05/2022 13:00	Umesh Chiluwal	05/05/2022 21:34	Umesh Chiluwal	2324125
	05/04/2022	05/05/2022 13:00	Umesh Chiluwal	05/05/2022 21:49	Umesh Chiluwal	2324126
	05/04/2022	05/05/2022 13:00	Umesh Chiluwal	05/05/2022 22:04	Umesh Chiluwal	2324127
	05/04/2022	05/05/2022 13:00	Umesh Chiluwal	05/06/2022 11:58	Umesh Chiluwal	2324125
	05/04/2022	05/05/2022 13:00	Umesh Chiluwal	05/06/2022 12:11	Umesh Chiluwal	2324126
	05/04/2022	05/05/2022 13:00	Umesh Chiluwal	05/06/2022 12:24	Umesh Chiluwal	2324127
	05/04/2022	05/06/2022 10:30	June Rhew	05/09/2022 19:31	Juyoung Kim	2324125

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	05/04/2022	05/06/2022 10:30	June Rhew	05/09/2022 19:49	Juyoung Kim	2324126
	05/04/2022	05/06/2022 10:30	June Rhew	05/09/2022 20:07	Juyoung Kim	2324127
	05/04/2022	05/06/2022 10:30	June Rhew	05/10/2022 01:29	Juyoung Kim	2324125
	05/04/2022	05/06/2022 10:30	June Rhew	05/10/2022 01:47	Juyoung Kim	2324126
	05/04/2022	05/06/2022 10:30	June Rhew	05/10/2022 02:05	Juyoung Kim	2324127
SM 2320 B-2011	05/04/2022			05/11/2022 03:38	Dale L. Simmons	2324095
	05/04/2022			05/11/2022 03:52	Dale L. Simmons	2324099
	05/04/2022			05/11/2022 04:18	Dale L. Simmons	2324096
SM 2340 B-2011	05/04/2022			05/06/2022 18:16	McKinley C Carter	2324128
	05/04/2022			05/06/2022 18:23	McKinley C Carter	2324129
	05/04/2022			05/06/2022 18:31	McKinley C Carter	2324130
	05/04/2022			05/06/2022 18:39	McKinley C Carter	2324131
	05/04/2022			05/06/2022 19:18	McKinley C Carter	2324132
SM 2540 C-2011	05/04/2022			05/05/2022 14:39	Yijie Li	2324095, 2324096, 2324099
SM 2540 D-2011	05/04/2022			05/05/2022 14:39	Yijie Li	2324095, 2324096, 2324099
SM 4500-F- C-2011	05/04/2022			05/11/2022 03:38	Dale L. Simmons	2324095
	05/04/2022			05/11/2022 03:52	Dale L. Simmons	2324099
	05/04/2022			05/11/2022 04:18	Dale L. Simmons	2324096
SM 5310 B-2011	05/04/2022			05/11/2022 20:17	Judith K. Clark	2324100
	05/04/2022			05/11/2022 21:35	Judith K. Clark	2324097
	05/04/2022			05/11/2022 21:49	Judith K. Clark	2324098