

Chemical Analysis Report

SE-DIST-2022-09-27-01

Florida DEP Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **Basinger 4/5**
Request ID: **RQ-2022-09-26-09**
Customer: **SE-DIST**
Project ID: **SMP**

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Date Certified: 18-OCT-2022 10:38



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: Chandler Slough @ Northern US98 Culvert

Collection Date/Time: 09/26/2022 10:00

Field ID: G4SE0141

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2359337	DEP SOP: NU-094-1	Color (true)	470		PCU	P420176	
	EPA 180.1 Rev. 2.0	Turbidity	1.7		NTU	P420182	
	EPA 300.0 Rev. 2.1	Chloride	21		mg Cl/L	P420331	
		Sulfate	8.8		mg SO4/L	P420334	
	SM 2320 B-2011	Total Alkalinity	48		mg CaCO3/L	P420428	
	SM 2540 C-2011	TDS	173		mg/L	P420664	
	SM 2540 D-2011	TSS	3	I	mg/L	P420669	
2359342	SM 4500-F- C-2011	Fluoride	0.096	I	mg F/L	P420430	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.038		mg N/L	P420587	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.0		mg N/L	P420204	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P420442	
	EPA 365.1 Rev. 2.0	Total-P	0.30		mg P/L	P420304	
	SM 5310 B-2011	Organic Carbon	38		mg C/L	P420537	

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: Chandler Slough @ NW 160th Dr.

Collection Date/Time: 09/26/2022 11:15

Field ID: G4SE0143

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2359338	DEP SOP: NU-094-1	Color (true)	270		PCU	P420176	
	EPA 180.1 Rev. 2.0	Turbidity	13		NTU	P420182	
	EPA 300.0 Rev. 2.1	Chloride	77		mg Cl/L	P420331	
		Sulfate	85		mg SO4/L	P420638	
	SM 2320 B-2011	Total Alkalinity	31		mg CaCO3/L	P420428	
	SM 2540 C-2011	TDS	311		mg/L	P420664	
	SM 2540 D-2011	TSS	5	I	mg/L	P420669	
	SM 4500-F- C-2011	Fluoride	0.15		mg F/L	P420430	
2359343	EPA 350.1 Rev. 2.0	Ammonia-N	0.80		mg N/L	P420587	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.5		mg N/L	P420268	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.063		mg N/L	P420442	
	EPA 365.1 Rev. 2.0	Total-P	0.48		mg P/L	P420304	
	SM 5310 B-2011	Organic Carbon	29		mg C/L	P420537	

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: Chandler Slough @ NW 190th

Collection Date/Time: 09/26/2022 11:30

Field ID: G4SE0136

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2359389	EPA 8321B	2,4-D	0.0060	I	ug/L	P420279	
		Acesulfame K	0.10	U	ug/L	P419980	
		2,4,5-T	0.0040	U	ug/L	P420279	
		AMPA	0.21	I	ug/L	P419980	
		Acetaminophen	0.0080	U	ug/L	P420279	
		Acetamiprid	0.0020	U	ug/L	P420279	
		Endothall	0.25	U	ug/L	P419980	
		Glufosinate	0.10	U	ug/L	P419980	
		Glyphosate	0.25	I	ug/L	P419980	
		Afidopyropen	0.0020	U	ug/L	P420279	
		Bentazon	8.0E-04	U	ug/L	P420279	
		Sucralose	0.010	U	ug/L	P419980	
		Benzovindiflupyr	0.0020	U	ug/L	P420279	
		Carbamazepine	8.0E-04	U	ug/L	P420279	
		Clothianidin	0.0020	U	ug/L	P420279	
		Dinotefuran	0.0020	U	ug/L	P420279	
		Diuron	0.0020	U	ug/L	P420279	
		Fenuron	0.032	U	ug/L	P420279	
		Fluridone	8.0E-04	U	ug/L	P420279	
		Imazapyr	0.019		ug/L	P420279	
		Hydrocodone	0.0020	U	ug/L	P420279	
		Ibuprofen	0.020	U	ug/L	P420279	
		Imidacloprid	0.0021	I	ug/L	P420279	
		Linuron	0.0040	U	ug/L	P420279	
		Mandestrobin	0.0020	U	ug/L	P420279	
		MCPP	0.0020	U	ug/L	P420279	
		Naproxen	0.0080	U	ug/L	P420279	
		Primidone	0.0040	U	ug/L	P420279	
		Pyraclostrobin	0.0020	U	ug/L	P420279	
		Silvex	0.0040	U	ug/L	P420279	
		Thiamethoxam	0.0022	I	ug/L	P420279	
		Tolfenpyrad	0.0020	U	ug/L	P420279	
		Triclopyr	0.0040	U	ug/L	P420279	

Ref. Method and Comment:

EPA 8321B: MS accuracy for bentazon could not be assessed due to a high concentration of parameters in the spiked sample.

Sample Location: Gore Branch / Chandler Slough @ NW 240th St. Collection Date/Time: 09/26/2022 12:00

Field ID: G4SE0145

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2359339	DEP SOP: NU-094-1	Color (true)	520		PCU	P420176	
	EPA 180.1 Rev. 2.0	Turbidity	7.4	A	NTU	P420182	
	EPA 300.0 Rev. 2.1	Chloride	41		mg Cl/L	P420331	
		Sulfate	14		mg SO4/L	P420334	
	SM 2320 B-2011	Total Alkalinity	46		mg CaCO3/L	P420428	
	SM 2540 C-2011	TDS	192		mg/L	P420664	
	SM 2540 D-2011	TSS	8	I	mg/L	P420669	
	SM 4500-F- C-2011	Fluoride	0.066	I	mg F/L	P420430	
2359344	EPA 350.1 Rev. 2.0	Ammonia-N	0.071		mg N/L	P420587	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.8		mg N/L	P420268	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P420442	
	EPA 365.1 Rev. 2.0	Total-P	0.50		mg P/L	P420304	
	SM 5310 B-2011	Organic Carbon	40		mg C/L	P420537	

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: Oak Creek @ 68

Collection Date/Time: 09/26/2022 10:45

Field ID: G4SE0080

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2359347	DEP SOP: NU-094-1	Color (true)	460		PCU	P420177	
	EPA 180.1 Rev. 2.0	Turbidity	5.0		NTU	P420182	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P420331	
		Sulfate	5.3		mg SO4/L	P420334	
	SM 2320 B-2011	Total Alkalinity	46		mg CaCO3/L	P420553	
	SM 2540 C-2011	TDS	166	A	mg/L	P420665	
	SM 2540 D-2011	TSS	6	IA	mg/L	P420670	
2359348	SM 4500-F- C-2011	Fluoride	0.057	I	mg F/L	P420557	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.13		mg N/L	P420588	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.5		mg N/L	P420205	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	I	mg N/L	P420442	
	EPA 365.1 Rev. 2.0	Total-P	0.48		mg P/L	P420304	
2359388	SM 5310 B-2011	Organic Carbon	34		mg C/L	P420537	
	EPA 8321B	2,4-D	0.0020	U	ug/L	P420279	
		Acesulfame K	0.10	U	ug/L	P419980	
		2,4,5-T	0.0040	U	ug/L	P420279	
		AMPA	0.10	U	ug/L	P419980	
		Acetaminophen	0.0080	U	ug/L	P420279	
		Acetamiprid	0.0020	U	ug/L	P420279	
		Endothall	0.25	U	ug/L	P419980	
		Glufosinate	0.10	U	ug/L	P419980	
		Glyphosate	0.10	U	ug/L	P419980	
		Afidopyropen	0.0020	U	ug/L	P420279	
		Bentazon	8.0E-04	U	ug/L	P420279	
		Sucralose	0.010	U	ug/L	P419980	
		Benzovindiflupyr	0.0020	U	ug/L	P420279	
		Carbamazepine	8.0E-04	U	ug/L	P420279	
		Clothianidin	0.0020	U	ug/L	P420279	
		Dinotefuran	0.0020	U	ug/L	P420279	
		Diuron	0.0020	U	ug/L	P420279	
		Fenuron	0.032	U	ug/L	P420279	
		Fluridone	8.0E-04	U	ug/L	P420279	
		Imazapyr	0.0040	U	ug/L	P420279	
		Hydrocodone	0.0020	U	ug/L	P420279	
		Ibuprofen	0.020	U	ug/L	P420279	
		Imidacloprid	0.0020	U	ug/L	P420279	
		Linuron	0.0040	U	ug/L	P420279	
		Mandestrobin	0.0020	U	ug/L	P420279	
		MCP	0.0020	U	ug/L	P420279	
		Naproxen	0.0080	U	ug/L	P420279	
		Primidone	0.0040	U	ug/L	P420279	
		Pyraclostrobin	0.0020	U	ug/L	P420279	
		Silvex	0.0040	U	ug/L	P420279	
		Thiamethoxam	0.0020	U	ug/L	P420279	

Field ID: G4SE0080

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2359388	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P420279	
		Triclopyr	0.0040	U	ug/L	P420279	
2359400	EPA 200.7 Rev. 4.4	Calcium	18.6		mg/L	P420197	
		Iron	1.66E+03		ug/L	P420197	
		Magnesium	4.58		mg/L	P420197	
		Potassium	4.1		mg/L	P420197	
		Sodium	9.1		mg/L	P420197	
		Strontium	285		ug/L	P420197	
		Tin	3.0	U	ug/L	P420197	
		Titanium	1.3	I	ug/L	P420197	
		Vanadium	2.0	U	ug/L	P420197	
		Zinc	5.9	I	ug/L	P420197	
	EPA 200.8 Rev. 5.4	Aluminum	209		ug/L	P420197	
		Antimony	0.064	I	ug/L	P420197	
		Arsenic	1.43		ug/L	P420197	
		Barium	26.9		ug/L	P420197	
		Beryllium	0.036	I	ug/L	P420197	
		Boron	23.4		ug/L	P420197	
		Cadmium	0.020	U	ug/L	P420197	
		Chromium	0.72	I	ug/L	P420197	
		Cobalt	0.376		ug/L	P420197	
		Copper	0.99		ug/L	P420197	
		Lead	0.20	U	ug/L	P420197	
		Manganese	72.2		ug/L	P420197	
		Molybdenum	0.15	U	ug/L	P420197	
		Nickel	0.50	U	ug/L	P420197	
		Selenium	0.20	U	ug/L	P420197	
		Silver	0.010	U	ug/L	P420197	
		Thallium	0.10	U	ug/L	P420197	
	SM 2340 B-2011	Hardness	65.4		mg/L	P420197	

Ref. Method and Comment:

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

EPA 8321B: MS accuracy for bentazon could not be assessed due to a high concentration of parameters in the spiked sample.

Sample Location: Chandler Slough @ Southern US98 Culvert

Collection Date/Time: 09/26/2022 09:45

Field ID: G4SE0142

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2359340	DEP SOP: NU-094-1	Color (true)	450		PCU	P420176	
	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P420182	
	EPA 300.0 Rev. 2.1	Chloride	54		mg Cl/L	P420331	
		Sulfate	14		mg SO4/L	P420334	
	SM 2320 B-2011	Total Alkalinity	53		mg CaCO3/L	P420428	
	SM 2540 C-2011	TDS	219		mg/L	P420664	
	SM 2540 D-2011	TSS	2	U	mg/L	P420669	
	SM 4500-F- C-2011	Fluoride	0.12		mg F/L	P420430	
2359345	EPA 350.1 Rev. 2.0	Ammonia-N	0.053		mg N/L	P420587	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.9		mg N/L	P420205	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.014		mg N/L	P420442	
	EPA 365.1 Rev. 2.0	Total-P	0.56		mg P/L	P420304	
	SM 5310 B-2011	Organic Carbon	34		mg C/L	P420537	

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: Padgett Branch @ 441

Collection Date/Time: 09/26/2022 12:30

Field ID: G3SE0026

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2359341	DEP SOP: NU-094-1	Color (true)	580		PCU	P420177	
	EPA 180.1 Rev. 2.0	Turbidity	4.6		NTU	P420182	
	EPA 300.0 Rev. 2.1	Chloride	14		mg Cl/L	P420331	
		Sulfate	1.9		mg SO4/L	P420334	
	SM 2320 B-2011	Total Alkalinity	12		mg CaCO3/L	P420428	
	SM 2540 C-2011	TDS	142		mg/L	P420664	
	SM 2540 D-2011	TSS	3	I	mg/L	P420669	
	SM 4500-F- C-2011	Fluoride	0.035	U	mg F/L	P420430	
2359346	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P420587	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.4		mg N/L	P420268	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P420442	
	EPA 365.1 Rev. 2.0	Total-P	0.24		mg P/L	P420304	
	SM 5310 B-2011	Organic Carbon	48		mg C/L	P420537	

Ref. Method and Comment:

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

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P420176

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P420177

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P420182

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P420197

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: P420197

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: P420331

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420334

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420638

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P420587

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P420588

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P420204

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P420205

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P420268

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420442

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P420304

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

Reference Method: EPA 8321B
Batch ID: P419980

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: P420279

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	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2320 B-2011
Batch ID: P420428

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P420553

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

Reference Method: SM 2540 C-2011
Batch ID: P420664

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2011
Batch ID: P420665

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P420669

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P420670

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P420430

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P420557

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P420537

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: P420176

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	90 - 110

Reference Method: DEP SOP: NU-094-1
Batch ID: P420177

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P420182

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P420197

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	103		P	85 - 115
Iron	105		P	85 - 115
Magnesium	102		P	85 - 115
Potassium	98.6		P	85 - 115
Sodium	104		P	85 - 115
Strontium	101		P	85 - 115
Tin	99.2		P	85 - 115
Titanium	101		P	85 - 115
Vanadium	99.4		P	85 - 115
Zinc	96.2		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P420197

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	98.3		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	102		P	85 - 115
Barium	102		P	85 - 115
Beryllium	94.3		P	85 - 115
Boron	100		P	85 - 115
Cadmium	99.6		P	85 - 115
Chromium	98.5		P	85 - 115
Cobalt	101		P	85 - 115
Copper	99.3		P	85 - 115
Lead	94.5		P	85 - 115
Manganese	98.8		P	85 - 115
Molybdenum	97.7		P	85 - 115
Nickel	99.6		P	85 - 115
Selenium	100		P	85 - 115
Silver	113		P	85 - 115
Thallium	95.6		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420331

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420334

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420638

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P420587

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P420588

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P420204

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P420205

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P420268

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420442

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	104		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P420304

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

Reference Method: EPA 8321B

Batch ID: P419980

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	99.9		P	40 - 150
AMPA	112		P	40 - 150
Endothall	97.7		P	40 - 150
Glufosinate	91.2		P	40 - 150
Glyphosate	109		P	40 - 150
Sucralose	106		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P420279

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	95.8		P	30 - 160
2,4,5-T	89.5		P	30 - 160
Acetaminophen	98.4		P	30 - 150
Acetamiprid	78.8		P	30 - 160
Afidopyropen	65.3		P	30 - 160
Bentazon	33.3		P	30 - 150
Benzovindiflupyr	82.6		P	30 - 160
Carbamazepine	75.3		P	30 - 160
Clothianidin	96.1		P	30 - 160
Dinotefuran	95.8		P	30 - 160
Diuron	76.3		P	30 - 160
Fenuron	103		P	30 - 160
Fluridone	97.7		P	30 - 160
Hydrocodone	93.6		P	30 - 160
Ibuprofen	79.3		P	30 - 160
Imazapyr	88.7		P	30 - 160
Imidacloprid	132		P	30 - 160
Linuron	76.2		P	30 - 160
Mandestrobin	86.9		P	30 - 160
MCPP	101		P	30 - 160
Naproxen	98.6		P	30 - 160
Primidone	90.9		P	30 - 160
Pyraclostrobin	91.1		P	30 - 160
Silvex	79.9		P	30 - 160
Thiamethoxam	91.8		P	30 - 160
Tolfenpyrad	44.2		P	30 - 160
Triclopyr	83.3		P	30 - 160

Reference Method: SM 2320 B-2011

Batch ID: P420428

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.5		P	94 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P420553

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.3		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P420430

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.9		P	96 - 104

Reference Method: SM 4500-F- C-2011
Batch ID: P420557

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P420537

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P420197

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2359311	Calcium	105		P	80 - 120
2359311	Iron	108	107	P/P	80 - 120
2359311	Magnesium	106	105	P/P	80 - 120
2359311	Potassium	103	102	P/P	80 - 120
2359311	Sodium	105		P	80 - 120
2359311	Strontium	104	104	P/P	80 - 120
2359311	Tin	104	103	P/P	80 - 120
2359311	Titanium	108	108	P/P	80 - 120
2359311	Vanadium	105	104	P/P	80 - 120
2359311	Zinc	98.4	98.4	P/P	80 - 120
2359312	Calcium	99.1		P	80 - 120
2359312	Iron	104		P	80 - 120
2359312	Magnesium	99.2		P	80 - 120
2359312	Potassium	98.8		P	80 - 120
2359312	Sodium	101		P	80 - 120
2359312	Strontium	101		P	80 - 120
2359312	Tin	100		P	80 - 120
2359312	Titanium	103		P	80 - 120
2359312	Vanadium	100		P	80 - 120
2359312	Zinc	96.9		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P420197

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2359311	Aluminum	98.9	100	P/P	80 - 120
2359311	Antimony	103	103	P/P	80 - 120
2359311	Arsenic	103	103	P/P	80 - 120
2359311	Barium	103	104	P/P	80 - 120
2359311	Beryllium	96.2	93.8	P/P	80 - 120
2359311	Boron	105	107	P/P	80 - 120
2359311	Cadmium	102	99.6	P/P	80 - 120
2359311	Chromium	103	104	P/P	80 - 120
2359311	Cobalt	100	101	P/P	80 - 120
2359311	Copper	101	99.4	P/P	80 - 120
2359311	Lead	95.8	96.3	P/P	80 - 120
2359311	Manganese	102	101	P/P	80 - 120
2359311	Molybdenum	102	102	P/P	80 - 120
2359311	Nickel	101	101	P/P	80 - 120
2359311	Selenium	100	99.5	P/P	80 - 120
2359311	Silver	113	115	P/P	80 - 120
2359311	Thallium	97.0	98.9	P/P	80 - 120
2359312	Aluminum	96.6		P	80 - 120
2359312	Antimony	105		P	80 - 120
2359312	Arsenic	103		P	80 - 120
2359312	Barium	104		P	80 - 120
2359312	Beryllium	92.8		P	80 - 120
2359312	Boron	102		P	80 - 120
2359312	Cadmium	103		P	80 - 120
2359312	Chromium	102		P	80 - 120
2359312	Cobalt	101		P	80 - 120
2359312	Copper	98.5		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P420197

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2359312	Lead	95.2		P	80 - 120
2359312	Manganese	102		P	80 - 120
2359312	Molybdenum	99.5		P	80 - 120
2359312	Nickel	100		P	80 - 120
2359312	Selenium	101		P	80 - 120
2359312	Silver	116		P	80 - 120
2359312	Thallium	97.2		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420331

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2359164	Chloride	96.9		P	90 - 110
2359550	Chloride	96.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420334

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2359164	Sulfate	94.9		P	90 - 110
2359550	Sulfate	94.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420638

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2359779	Sulfate	98.3		P	90 - 110
2359913	Sulfate	98.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P420587

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2359281	Ammonia-N	98.4	98.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P420588

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2359381	Ammonia-N	98.6	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P420204

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2359002	Kjeldahl Nitrogen	108	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P420205

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2359459	Kjeldahl Nitrogen	98.7	94.8	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P420268

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2359306	Kjeldahl Nitrogen	107	110	P/F	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420442

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2359306	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P420304

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2359378	Total-P	108	108	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P419980

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2358851	Acesulfame K	86.6	88.8	P/P	40 - 150
2358851	AMPA	100	106	P/P	40 - 150
2358851	Endothall	126	130	P/P	40 - 150
2358851	Glufosinate	85.2	67.6	P/P	40 - 150
2358851	Glyphosate	85.1	90.0	P/P	40 - 150
2358851	Sucralose	104	104	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P420279

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2359530	2,4-D	106	108	P/P	30 - 160
2359530	2,4,5-T	98.9	97.1	P/P	30 - 160
2359530	Acetaminophen	114	118	P/P	30 - 150
2359530	Acetamiprid	71.5	71.3	P/P	30 - 160
2359530	Afidopyropen	80.4	79.9	P/P	30 - 160
2359530	Benzovindiflupyr	73.6	74.9	P/P	30 - 160
2359530	Carbamazepine	68.8	68.8	P/P	30 - 160
2359530	Clothianidin	111	115	P/P	30 - 160
2359530	Dinotefuran	106	111	P/P	30 - 160
2359530	Diuron	71.9	67.1	P/P	30 - 160
2359530	Fenuron	85.9	88.1	P/P	30 - 160
2359530	Fluridone	87.6	89.3	P/P	30 - 160
2359530	Hydrocodone	93.6	94.2	P/P	30 - 160
2359530	Ibuprofen	74.2	62.6	P/P	30 - 160
2359530	Imazapyr	99.6	99.4	P/P	30 - 160
2359530	Imidacloprid	117	114	P/P	30 - 160
2359530	Linuron	72.2	69.8	P/P	30 - 160
2359530	Mandestrobin	84.7	83.3	P/P	30 - 160
2359530	MCPP	119	116	P/P	30 - 160
2359530	Naproxen	95.4	110	P/P	30 - 160
2359530	Primidone	92.2	97.1	P/P	30 - 160
2359530	Pyraclostrobin	90.8	91.8	P/P	30 - 160
2359530	Silvex	91.9	97.4	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P420279

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2359530	Thiamethoxam	122	125	P/P	30 - 160
2359530	Tolfenpyrad	47.2	49.1	P/P	30 - 160
2359530	Triclopyr	93.7	95.3	P/P	30 - 160

Reference Method: SM 4500-F- C-2011
Batch ID: P420430

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2359300	Fluoride	99.5	99.5	P/P	94 - 104

Reference Method: SM 4500-F- C-2011
Batch ID: P420557

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2359568	Fluoride	100	99.5	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P420537

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2359346	Organic Carbon	101		P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P420176

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2359566	Color (true)	0.701	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P420177

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2359567	Color (true)	2.34	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P420182

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2359339	Turbidity	4.05	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P420197

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2359311	Calcium	2.42	Spike	P	0 - 20
2359311	Iron	1.03	Spike	P	0 - 20
2359311	Magnesium	0.704	Spike	P	0 - 20
2359311	Potassium	0.209	Spike	P	0 - 20
2359311	Sodium	0.394	Spike	P	0 - 20
2359311	Strontium	0.116	Spike	P	0 - 20
2359311	Tin	1.38	Spike	P	0 - 20
2359311	Titanium	0.391	Spike	P	0 - 20
2359311	Vanadium	0.914	Spike	P	0 - 20
2359311	Zinc	0.0564	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P420197

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2359311	Aluminum	0.927	Spike	P	0 - 20
2359311	Antimony	0.218	Spike	P	0 - 20
2359311	Arsenic	0.00455	Spike	P	0 - 20
2359311	Barium	0.309	Spike	P	0 - 20
2359311	Beryllium	2.59	Spike	P	0 - 20
2359311	Boron	2.47	Spike	P	0 - 20
2359311	Cadmium	1.93	Spike	P	0 - 20
2359311	Chromium	0.342	Spike	P	0 - 20
2359311	Cobalt	0.376	Spike	P	0 - 20
2359311	Copper	2.07	Spike	P	0 - 20
2359311	Lead	0.569	Spike	P	0 - 20
2359311	Manganese	0.391	Spike	P	0 - 20
2359311	Molybdenum	0.0696	Spike	P	0 - 20
2359311	Nickel	0.570	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P420197

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2359311	Selenium	0.886	Spike	P	0 - 20
2359311	Silver	2.18	Spike	P	0 - 20
2359311	Thallium	1.83	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420331

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2359164	Chloride	0.235	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420334

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2359164	Sulfate	0.333	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420638

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2359779	Sulfate	0.327	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P420587

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2359281	Ammonia-N	0.192	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P420588

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2359381	Ammonia-N	2.32	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P420204

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2359002	Kjeldahl Nitrogen	2.43	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P420205

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: P420205

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2359459	Kjeldahl Nitrogen	2.62	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P420268

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2359306	Kjeldahl Nitrogen	2.85	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420442

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2359306	NO2NO3-N	0.279	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P420304

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2359378	Total-P	0.384	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P419980

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2358851	Acesulfame K	2.46	Spike	P	0 - 30
2358851	AMPA	5.11	Spike	P	0 - 30
2358851	Endothall	2.70	Spike	P	0 - 30
2358851	Glufosinate	23.1	Spike	P	0 - 30
2358851	Glyphosate	5.63	Spike	P	0 - 30
2358851	Sucralose	0.187	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P420279

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2359530	2,4-D	1.63	Spike	P	0 - 30
2359530	2,4,5-T	1.77	Spike	P	0 - 30
2359530	Acetaminophen	3.80	Spike	P	0 - 30
2359530	Acetamiprid	0.288	Spike	P	0 - 30
2359530	Afidopyropen	0.562	Spike	P	0 - 30
2359530	Bentazon	3.73	Spike	P	0 - 30
2359530	Benzovindiflupyr	1.66	Spike	P	0 - 30
2359530	Carbamazepine	0.00701	Spike	P	0 - 30
2359530	Clothianidin	3.93	Spike	P	0 - 30
2359530	Dinotefuran	5.04	Spike	P	0 - 30
2359530	Diuron	5.39	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P420279

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2359530	Fenuron	2.52	Spike	P	0 - 30
2359530	Fluridone	1.39	Spike	P	0 - 30
2359530	Hydrocodone	0.654	Spike	P	0 - 30
2359530	Ibuprofen	16.9	Spike	P	0 - 30
2359530	Imazapyr	0.222	Spike	P	0 - 30
2359530	Imidacloprid	1.73	Spike	P	0 - 30
2359530	Linuron	3.31	Spike	P	0 - 30
2359530	Mandestrobin	1.74	Spike	P	0 - 30
2359530	MCCP	2.75	Spike	P	0 - 30
2359530	Naproxen	14.1	Spike	P	0 - 30
2359530	Primidone	4.77	Spike	P	0 - 30
2359530	Pyraclostrobin	1.04	Spike	P	0 - 30
2359530	Silvex	5.89	Spike	P	0 - 30
2359530	Thiamethoxam	2.54	Spike	P	0 - 30
2359530	Tolfenpyrad	3.86	Spike	P	0 - 30
2359530	Triclopyr	1.68	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P420428

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2359300	Total Alkalinity	0.806	Sample	P	0 - 3.8

Reference Method: SM 2320 B-2011
Batch ID: P420553

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2359568	Total Alkalinity	0.859	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2011
Batch ID: P420664

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2359302	TDS	8.00	Sample	P	0 - 10

Reference Method: SM 2540 C-2011
Batch ID: P420665

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2359347	TDS	4.23	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P420430

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2359300	Fluoride	0.0	Spike	P	0 - 1.6

Quality Assurance Report Precision

Reference Method: SM 4500-F- C-2011
Batch ID: P420557

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2359568	Fluoride	0.477	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P420537

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2359346	Organic Carbon	0.212	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2359388
Field Sample ID: G4SE0080

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	140	P	30 - 160
EPA 8321B	Acetaminophen-d4	117	P	30 - 160
EPA 8321B	Carbamazepine-d10	53.7	P	30 - 160
EPA 8321B	Diuron-d6	43.2	P	30 - 160
EPA 8321B	Endothall-d6	126	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	93.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	69.7	P	30 - 160
EPA 8321B	Primidone-d5	65.7	P	30 - 160
EPA 8321B	Sucralose-d6	103	P	30 - 160

Lab Sample ID: 2359389
Field Sample ID: G4SE0136

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	143	P	30 - 160
EPA 8321B	Acetaminophen-d4	133	P	30 - 160
EPA 8321B	Carbamazepine-d10	63.9	P	30 - 160
EPA 8321B	Diuron-d6	48.5	P	30 - 160
EPA 8321B	Endothall-d6	123	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	102	P	30 - 160
EPA 8321B	Ibuprofen-d3	78.2	P	30 - 160
EPA 8321B	Primidone-d5	92.3	P	30 - 160
EPA 8321B	Sucralose-d6	99.3	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A114965

Included Lab Sample IDs: 2359337, 2359338, 2359339, 2359340, 2359341, 2359347

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	103	103	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A114967

Included Lab Sample IDs: 2359337, 2359338, 2359339, 2359340, 2359341, 2359347

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

Reference Method: EPA 8321B

Run ID: A114978

Included Lab Sample IDs: 2359388, 2359389

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	113	120	P/P	60 - 160
Endothall	85.8	89.6	P/P	60 - 160
Glufosinate	83.2	78.2	P/P	60 - 160
Glyphosate	109	112	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A114979

Included Lab Sample IDs: 2359388, 2359389

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	111	117	P/P	60 - 160
Sucralose	105	103	P/P	60 - 160

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A114999

Included Lab Sample IDs: 2359337, 2359338, 2359339, 2359340, 2359341, 2359347

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	101	P/P	90 - 110
Chloride	99.9	100	P/P	90 - 110
Sulfate	101	101	P/P	90 - 110
Sulfate	99.7	101	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A115038

Included Lab Sample IDs: 2359400

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	102	101	P/P	90 - 110
Antimony	101	99.4	P/P	90 - 110
Arsenic	102	101	P/P	90 - 110
Barium	100	100	P/P	90 - 110
Beryllium	97.1	96.8	P/P	90 - 110
Boron	106	102	P/P	90 - 110
Cadmium	101	101	P/P	90 - 110
Chromium	99.4	97.7	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A115038

Included Lab Sample IDs: 2359400

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cobalt	98.8	99.2	P/P	90 - 110
Copper	98.2	98.3	P/P	90 - 110
Lead	95.5	95.1	P/P	90 - 110
Manganese	99.1	97.4	P/P	90 - 110
Molybdenum	99.6	99.3	P/P	90 - 110
Nickel	98.6	98.8	P/P	90 - 110
Selenium	101	100	P/P	90 - 110
Silver	100	100	P/P	90 - 110
Thallium	96.1	95.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A115043

Included Lab Sample IDs: 2359342, 2359343, 2359344, 2359345, 2359346, 2359348

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	101	P/P	90 - 110
Total-P	102	100	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A115060

Included Lab Sample IDs: 2359400

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	103	103	P/P	90 - 110
Iron	103	103	P/P	90 - 110
Magnesium	102	101	P/P	90 - 110
Potassium	98.8	98.9	P/P	90 - 110
Sodium	103	103	P/P	90 - 110
Strontium	98.9	98.8	P/P	90 - 110
Tin	99.6	98.9	P/P	90 - 110
Titanium	99.8	98.5	P/P	90 - 110
Vanadium	98.9	98.5	P/P	90 - 110
Zinc	97.1	97.7	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A115078

Included Lab Sample IDs: 2359388, 2359389

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	79.6	94.5	P/P	50 - 150
2,4,5-T	86.9	95.7	P/P	50 - 150
Acetaminophen	103	103	P/P	60 - 160
Acetamiprid	100	100	P/P	50 - 150
Afidopyropen	85.3	96.5	P/P	50 - 150
Bentazon	103	101	P/P	50 - 160
Benzovindiflupyr	97.7	94.8	P/P	50 - 150
Carbamazepine	102	94.1	P/P	60 - 150
Clothianidin	99.9	97.0	P/P	60 - 150
Dinotefuran	104	103	P/P	50 - 150
Diuron	110	106	P/P	60 - 160
Fenuron	99.0	98.6	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A115078

Included Lab Sample IDs: 2359388, 2359389

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluridone	105	111	P/P	60 - 160
Hydrocodone	96.9	98.1	P/P	60 - 150
Ibuprofen	131	139	P/P	50 - 160
Imazapyr	85.3	83.5	P/P	50 - 150
Imidacloprid	91.0	93.3	P/P	60 - 150
Linuron	96.0	102	P/P	60 - 150
Mandestrobin	100	93.4	P/P	50 - 150
MCPP	97.9	92.5	P/P	50 - 150
Naproxen	118	78.3	P/P	50 - 160
Primidone	99.3	101	P/P	60 - 150
Pyraclostrobin	107	109	P/P	60 - 150
Silvex	100	94.1	P/P	50 - 150
Thiamethoxam	94.1	94.4	P/P	50 - 150
Tolfenpyrad	95.1	94.8	P/P	60 - 150
Triclopyr	83.0	93.7	P/P	50 - 150

Reference Method: SM 2320 B-2011

Run ID: A115100

Included Lab Sample IDs: 2359337, 2359338, 2359339, 2359340, 2359341

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.4	96.3	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A115100

Included Lab Sample IDs: 2359337, 2359338, 2359339, 2359340, 2359341

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A115111

Included Lab Sample IDs: 2359342, 2359343, 2359344, 2359345, 2359346, 2359348

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	105	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A115115

Included Lab Sample IDs: 2359342, 2359343, 2359344, 2359345, 2359346, 2359348

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	102	P/P	90 - 110
Kjeldahl Nitrogen	102	102	P/P	90 - 110
Kjeldahl Nitrogen	108	101	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A115145

Included Lab Sample IDs: 2359342, 2359343, 2359344, 2359345, 2359346, 2359348

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

Reference Method: SM 5310 B-2011

Run ID: A115145

Included Lab Sample IDs: 2359342, 2359343, 2359344, 2359345, 2359346, 2359348

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.5	97.8	P/P	90 - 110
Organic Carbon	97.8	98.1	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A115150

Included Lab Sample IDs: 2359347

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	94.5	101	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A115150

Included Lab Sample IDs: 2359347

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A115158

Included Lab Sample IDs: 2359342, 2359343, 2359344, 2359345, 2359346, 2359348

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.2	98.2	P/P	90 - 110
Ammonia-N	99.2	99.1	P/P	90 - 110
Ammonia-N	99.7	98.2	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A115188

Included Lab Sample IDs: 2359338

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

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision SMP	MS
			LCS				
DEP SOP: NU-094-1	Color (true)	100				0.701	
	Color (true)	99.6				2.34	
EPA 180.1 Rev. 2.0	Turbidity	101				4.05	
EPA 200.7 Rev. 4.4	Calcium	103	105	99.1			2.42
	Iron	105	108	107	104		1.03
	Magnesium	102	106	105	99.2		0.704
	Potassium	98.6	103	102	98.8		0.209
	Sodium	104	105	101			0.394
	Strontium	101	104	104	101		0.116
	Tin	99.2	104	103	100		1.38
	Titanium	101	108	108	103		0.391
	Vanadium	99.4	105	104	100		0.914
	Zinc	96.2	98.4	98.4	96.9		0.0564
	Aluminum	98.3	98.9	100	96.6		0.927
	Antimony	101	103	103	105		0.218
	Arsenic	102	103	103	103		0.0045
	Barium	102	103	104	104		0.309
EPA 200.8 Rev. 5.4	Beryllium	94.3	96.2	93.8	92.8		2.59
	Boron	100	105	107	102		2.47
	Cadmium	99.6	102	99.6	103		1.93
	Chromium	98.5	103	104	102		0.342
	Cobalt	101	100	101	101		0.376
	Copper	99.3	101	99.4	98.5		2.07
	Lead	94.5	95.2	95.8	96.3		0.569
	Manganese	98.8	102	101	102		0.391
	Molybdenum	97.7	102	102	99.5		0.0696
	Nickel	99.6	101	101	100		0.570
	Selenium	100	100	99.5	101		0.886
	Silver	113	113	115	116		2.18
	Thallium	95.6	97.0	98.9	97.2		1.83
	Chloride	101	96.9	96.8		0.235	
	Sulfate	99.1	94.9	94.2		0.333	
	Sulfate	102	98.3	98.9		0.327	
	Ammonia-N	97.0	98.4	98.6			0.192
	Ammonia-N	98.0	98.6	101			2.32
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	108	105			2.43
	Kjeldahl Nitrogen	96.6	98.7	94.8			2.62
	Kjeldahl Nitrogen	106	107	110			2.85
EPA 353.2 Rev. 2.0	NO2NO3-N	104	102	102			0.279
EPA 365.1 Rev. 2.0	Total-P	105	108	108			0.384
EPA 8321B	2,4-D	95.8	106	108			1.63
	2,4,5-T	89.5	98.9	97.1			1.77
	Acesulfame K	99.9	86.6	88.8			2.46
	Acetaminophen	98.4	114	118			3.80
	Acetamiprid	78.8	71.5	71.3			0.288
	Afidopyropen	65.3	80.4	79.9			0.562
	AMPA	112	100	106			5.11
	Bentazon	33.3					3.73
	Benzovindiflupyr	82.6	73.6	74.9			1.66
	Carbamazepine	75.3	68.8	68.8			0.0070
	Clothianidin	96.1	111	115			3.93
	Dinotefuran	95.8	106	111			5.04
	Diuron	76.3	71.9	67.1			5.39
	Endothall	97.7	126	130			2.70

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Fenuron	103	85.9	88.1		2.52
	Fluridone	97.7	87.6	89.3		1.39
	Glufosinate	91.2	85.2	67.6		23.1
	Glyphosate	109	85.1	90.0		5.63
	Hydrocodone	93.6	93.6	94.2		0.654
	Ibuprofen	79.3	74.2	62.6		16.9
	Imazapyr	88.7	99.6	99.4		0.222
	Imidacloprid	132	117	114		1.73
	Linuron	76.2	72.2	69.8		3.31
	Mandestrobin	86.9	84.7	83.3		1.74
	MCPP	101	119	116		2.75
	Naproxen	98.6	95.4	110		14.1
	Primidone	90.9	92.2	97.1		4.77
	Pyraclostrobin	91.1	90.8	91.8		1.04
	Silvex	79.9	91.9	97.4		5.89
	Sucralose	106	104	104		0.187
	Thiamethoxam	91.8	122	125		2.54
	Tolfenpyrad	44.2	47.2	49.1		3.86
	Triclopyr	83.3	93.7	95.3		1.68
SM 2320 B-2011	Total Alkalinity	98.5			0.806	
	Total Alkalinity	99.3			0.859	
SM 2540 C-2011	TDS				8.00	
	TDS				4.23	
SM 4500-F- C-2011	Fluoride	97.9	99.5	99.5		0.0
	Fluoride	100	100	99.5		0.477
SM 5310 B-2011	Organic Carbon	96.9	101			0.212

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2359337, 2359338, 2359339, 2359340, 2359341, 2359347
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2359337, 2359338, 2359339, 2359340, 2359341, 2359347
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2359400
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2359400
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2359337, 2359338, 2359339, 2359340, 2359341, 2359347
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2359337, 2359338, 2359339, 2359340, 2359341, 2359347
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2359342, 2359343, 2359344, 2359345, 2359346, 2359348
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2359342, 2359343, 2359344, 2359345, 2359346, 2359348
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2359342, 2359343, 2359344, 2359345, 2359346, 2359348
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2359342, 2359343, 2359344, 2359345, 2359346, 2359348
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2359388, 2359389
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2359337, 2359338, 2359339, 2359340, 2359341, 2359347
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2359400

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2359337, 2359338, 2359339, 2359340, 2359341, 2359347
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2359337, 2359338, 2359339, 2359340, 2359341, 2359347
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2359337, 2359338, 2359339, 2359340, 2359341, 2359347
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2359342, 2359343, 2359344, 2359345, 2359346, 2359348

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	09/27/2022			09/27/2022 15:51	Anna M. Plaviak	2359340
	09/27/2022			09/27/2022 15:52	Anna M. Plaviak	2359338, 2359339
	09/27/2022			09/27/2022 15:53	Anna M. Plaviak	2359337, 2359341
	09/27/2022			09/27/2022 15:54	Anna M. Plaviak	2359347
EPA 180.1 Rev. 2.0	09/27/2022			09/27/2022 14:45	Chandler E Cox	2359339
	09/27/2022			09/27/2022 14:56	Chandler E Cox	2359340
	09/27/2022			09/27/2022 14:59	Chandler E Cox	2359338
	09/27/2022			09/27/2022 15:00	Chandler E Cox	2359337
EPA 200.7 Rev. 4.4	09/27/2022			09/27/2022 15:01	Chandler E Cox	2359341
	09/27/2022			09/27/2022 15:02	Chandler E Cox	2359347
	09/27/2022	09/28/2022 10:45	Megan Whitefoot	10/01/2022 03:50	McKinley C Carter	2359400
	09/27/2022	09/28/2022 10:45	Megan Whitefoot	09/29/2022 19:23	Emily M Philpot	2359400
EPA 200.8 Rev. 5.4	09/27/2022			09/29/2022 23:02	Anna M. Plaviak	2359340
	09/27/2022			09/29/2022 23:17	Anna M. Plaviak	2359338
	09/27/2022			09/30/2022 00:02	Anna M. Plaviak	2359339
	09/27/2022			09/30/2022 00:17	Anna M. Plaviak	2359337
EPA 300.0 Rev. 2.1	09/27/2022			09/30/2022 00:32	Anna M. Plaviak	2359341
	09/27/2022			09/30/2022 00:47	Anna M. Plaviak	2359347
	09/27/2022			10/06/2022 18:26	Anna M. Plaviak	2359338
	09/27/2022			10/06/2022 11:47	Ping Hua	2359345
EPA 350.1 Rev. 2.0	09/27/2022			10/06/2022 11:51	Ping Hua	2359342
	09/27/2022			10/06/2022 11:52	Ping Hua	2359346
	09/27/2022			10/06/2022 12:08	Ping Hua	2359348
	09/27/2022			10/06/2022 14:04	Ping Hua	2359344
EPA 351.2 Rev. 2.0	09/27/2022			10/06/2022 14:08	Ping Hua	2359343
	09/27/2022	09/28/2022 12:10	Alexandra J Mattheus	10/04/2022 10:19	Samantha L Bates	2359342
	09/27/2022	09/28/2022 12:10	Alexandra J Mattheus	10/04/2022 10:29	Samantha L Bates	2359345
	09/27/2022	09/28/2022 12:10	Alexandra J Mattheus	10/04/2022 10:31	Samantha L Bates	2359348
EPA 353.2 Rev. 2.0	09/27/2022	09/29/2022 11:15	Simonne.V. Calhoun	10/04/2022 11:35	Samantha L Bates	2359343
	09/27/2022	09/29/2022 11:15	Simonne.V. Calhoun	10/04/2022 11:37	Samantha L Bates	2359344
	09/27/2022	09/29/2022 11:15	Simonne.V. Calhoun	10/04/2022 11:38	Samantha L Bates	2359346
	09/27/2022			10/04/2022 10:39	Beverly Y. Sanders	2359345
EPA 365.1 Rev. 2.0	09/27/2022			10/04/2022 10:41	Beverly Y. Sanders	2359343
	09/27/2022			10/04/2022 10:42	Beverly Y. Sanders	2359344
	09/27/2022			10/04/2022 10:43	Beverly Y. Sanders	2359342
	09/27/2022			10/04/2022 10:44	Beverly Y. Sanders	2359346
EPA 365.1 Rev. 2.0	09/27/2022			10/04/2022 10:45	Beverly Y. Sanders	2359348
	09/27/2022	09/29/2022 14:45	Adam P Silver	09/30/2022 10:11	Simonne.V. Calhoun	2359345
	09/27/2022	09/29/2022 14:45	Adam P Silver	09/30/2022 10:12	Simonne.V. Calhoun	2359343
	09/27/2022	09/29/2022 14:45	Adam P Silver	09/30/2022 10:13	Simonne.V. Calhoun	2359344

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 365.1 Rev. 2.0	09/27/2022	09/29/2022 14:45	Adam P Silver	09/30/2022 10:14	Simonne.V. Calhoun	2359342
	09/27/2022	09/29/2022 14:45	Adam P Silver	09/30/2022 10:18	Simonne.V. Calhoun	2359346
	09/27/2022	09/29/2022 14:45	Adam P Silver	09/30/2022 10:19	Simonne.V. Calhoun	2359348
EPA 8321B	09/27/2022	09/27/2022 12:00	Umesh Chiluwal	09/27/2022 15:29	Umesh Chiluwal	2359388
	09/27/2022	09/27/2022 12:00	Umesh Chiluwal	09/27/2022 15:42	Umesh Chiluwal	2359389
	09/27/2022	09/27/2022 12:00	Umesh Chiluwal	09/28/2022 02:13	Umesh Chiluwal	2359388
	09/27/2022	09/27/2022 12:00	Umesh Chiluwal	09/28/2022 02:28	Umesh Chiluwal	2359389
	09/27/2022	09/30/2022 09:30	June Rhew	09/30/2022 18:59	Juyoung Kim	2359388
	09/27/2022	09/30/2022 09:30	June Rhew	09/30/2022 19:17	Juyoung Kim	2359389
SM 2320 B-2011	09/27/2022			10/03/2022 22:47	Dale L. Simmons	2359340
	09/27/2022			10/03/2022 22:59	Dale L. Simmons	2359338
	09/27/2022			10/03/2022 23:12	Dale L. Simmons	2359339
	09/27/2022			10/03/2022 23:24	Dale L. Simmons	2359337
	09/27/2022			10/03/2022 23:37	Dale L. Simmons	2359341
	09/27/2022			10/05/2022 22:08	Dale L. Simmons	2359347
SM 2340 B-2011	09/27/2022			10/01/2022 03:50	McKinley C Carter	2359400
SM 2540 C-2011	09/27/2022			09/30/2022 16:11	Yijie Li	2359337, 2359338, 2359339, 2359340, 2359341, 2359347
SM 2540 D-2011	09/27/2022			09/30/2022 16:11	Yijie Li	2359337, 2359338, 2359339, 2359340, 2359341, 2359347
SM 4500-F- C-2011	09/27/2022			10/03/2022 22:47	Dale L. Simmons	2359340
	09/27/2022			10/03/2022 22:59	Dale L. Simmons	2359338
	09/27/2022			10/03/2022 23:12	Dale L. Simmons	2359339
	09/27/2022			10/03/2022 23:24	Dale L. Simmons	2359337
	09/27/2022			10/03/2022 23:37	Dale L. Simmons	2359341
	09/27/2022			10/05/2022 22:08	Dale L. Simmons	2359347
SM 5310 B-2011	09/27/2022			10/04/2022 21:16	Touraj Touran	2359346
	09/27/2022			10/04/2022 23:55	Touraj Touran	2359345
	09/27/2022			10/05/2022 00:09	Touraj Touran	2359343
	09/27/2022			10/05/2022 00:23	Touraj Touran	2359344
	09/27/2022			10/05/2022 00:37	Touraj Touran	2359342
	09/27/2022			10/05/2022 00:50	Touraj Touran	2359348