

Chemical Analysis Report

NW-DIST-2022-10-27-01

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

Event Description: **Jay Run**
Request ID: **RQ-2022-10-24-17**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 W Government Street
Suite 208
Pensacola, FL 32502-5794
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Certified by: Colin Wright, Program Administrator

Date Certified: 18-NOV-2022 10:58

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light pink rectangular 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: Big Coldwater Creek upstream of HWY 4

Collection Date/Time: 10/26/2022 10:35

Field ID: G4NW0502

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2365696	DEP SOP: NU-094-1	Color (true)	16		PCU	P421559	
	EPA 180.1 Rev. 2.0	Turbidity	3.0		NTU	P421566	
	EPA 300.0 Rev. 2.1	Chloride	9.9		mg Cl/L	P422163	
		Sulfate	0.98		mg SO4/L	P422167	
	SM 2320 B-2011	Total Alkalinity	3.0		mg CaCO3/L	P422004	
	SM 2540 C-2015	TDS	38		mg/L	P422070	
	SM 2540 D-2015	TSS	3	I	mg/L	P421783	
	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P422018	
2365697	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P421959	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.26		mg N/L	P421700	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.4		mg N/L	P421837	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P421774	
	SM 5310 B-2011	Organic Carbon	2.4		mg C/L	P421795	
2365710	EPA 200.7 Rev. 4.4	Calcium	2.52		mg/L	P421668	
		Iron	290		ug/L	P421668	
		Magnesium	2.07		mg/L	P421668	
		Potassium	1.3		mg/L	P421668	
		Sodium	3.3		mg/L	P421668	
		Strontium	29.2		ug/L	P421590	
		Tin	3.0	U	ug/L	P421590	
		Titanium	1.4	I	ug/L	P421590	
		Vanadium	2.0	U	ug/L	P421590	
		Zinc	5.0	U	ug/L	P421590	
	EPA 200.8 Rev. 5.4	Aluminum	75		ug/L	P421590	
		Antimony	0.050	U	ug/L	P421590	
		Arsenic	0.21		ug/L	P421590	
		Barium	62.6		ug/L	P421590	
		Beryllium	0.055		ug/L	P421590	
		Boron	16.3		ug/L	P421590	
		Cadmium	0.020	U	ug/L	P421590	
		Chromium	0.40	U	ug/L	P421590	
		Cobalt	0.406		ug/L	P421590	
		Copper	0.40	U	ug/L	P421590	
		Lead	0.20	U	ug/L	P421590	
		Manganese	31.9		ug/L	P421590	
		Molybdenum	0.15	U	ug/L	P421590	
		Nickel	0.63	I	ug/L	P421590	
		Selenium	0.20	U	ug/L	P421590	
		Silver	0.010	U	ug/L	P421590	
		Thallium	0.10	U	ug/L	P421590	
		Hardness	14.8		mg/L	P421668	
	SM 2340 B-2011	Hardness	14.8		mg/L	P421668	

Field ID: G4NW0502

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Ref. Method and Comment:
DEP SOP: NU-094-1: Batch relative percent difference is unavailable because of analytical difficulties.
EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Bear Creek 40m blw Lake Dam outfall

Collection Date/Time: 10/26/2022 11:30

Field ID: G4NW0001

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2365692	DEP SOP: NU-094-1	Color (true)	2.5	U	PCU	P421562	
	EPA 180.1 Rev. 2.0	Turbidity	140		NTU	P421566	
	EPA 300.0 Rev. 2.1	Chloride	2.8		mg Cl/L	P422163	
		Sulfate	0.33	I	mg SO4/L	P422167	
	SM 2320 B-2011	Total Alkalinity	11		mg CaCO3/L	P422004	
	SM 2540 C-2015	TDS	26		mg/L	P422070	
	SM 2540 D-2015	TSS	252		mg/L	P421783	
2365693	SM 4500-F- C-2011	Fluoride	0.041	I	mg F/L	P422018	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.26		mg N/L	P421959	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.71		mg N/L	P421701	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.009	I	mg N/L	P421837	
	EPA 365.1 Rev. 2.0	Total-P	0.037		mg P/L	P421774	
2365708	SM 5310 B-2011	Organic Carbon	3.1		mg C/L	P421887	
	EPA 200.7 Rev. 4.4	Calcium	4.17		mg/L	P421668	
		Iron	3.71E+04		ug/L	P421668	
		Magnesium	1.50		mg/L	P421668	
		Potassium	0.40	I	mg/L	P421668	
		Sodium	1.4	I	mg/L	P421668	
		Strontium	10.5		ug/L	P421590	
		Tin	3.0	U	ug/L	P421590	
		Titanium	40.0		ug/L	P421590	
		Vanadium	8.4		ug/L	P421590	
		Zinc	6.5	I	ug/L	P421590	
	EPA 200.8 Rev. 5.4	Aluminum	2.30E+03		ug/L	P421590	
		Antimony	0.075	I	ug/L	P421590	
		Arsenic	12.5		ug/L	P421590	
		Barium	26.0		ug/L	P421590	
		Beryllium	0.227		ug/L	P421590	
		Boron	8.9		ug/L	P421590	
		Cadmium	0.025	I	ug/L	P421590	
		Chromium	3.1		ug/L	P421590	
		Cobalt	3.49		ug/L	P421590	
		Copper	2.33		ug/L	P421590	
		Lead	3.57		ug/L	P421590	
		Manganese	321		ug/L	P421590	
		Molybdenum	0.22	I	ug/L	P421590	
		Nickel	0.97	I	ug/L	P421590	
		Selenium	0.20	U	ug/L	P421590	
		Silver	0.010	U	ug/L	P421590	
		Thallium	0.10	U	ug/L	P421590	
	SM 2340 B-2011	Hardness	16.6		mg/L	P421668	

Field ID: G4NW0001

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Ref. Method and Comment:
DEP SOP: NU-094-1: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 11/02/2022.

Sample Location: Manning Creek upstream of Manning Creek Rd Collection Date/Time: 10/26/2022 13:20

Field ID: G4NW0435

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2365698	DEP SOP: NU-094-1	Color (true)	19		PCU	P421560	
	EPA 180.1 Rev. 2.0	Turbidity	2.7		NTU	P421566	
	EPA 300.0 Rev. 2.1	Chloride	5.4		mg Cl/L	P422163	
		Sulfate	0.78		mg SO4/L	P422167	
	SM 2320 B-2011	Total Alkalinity	2.4	I	mg CaCO3/L	P422004	
	SM 2540 C-2015	TDS	31		mg/L	P422070	
	SM 2540 D-2015	TSS	4	I	mg/L	P421783	
	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P422018	
2365699	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P421959	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.19	I	mg N/L	P421746	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.6		mg N/L	P421837	
	EPA 365.1 Rev. 2.0	Total-P	0.01		mg P/L	P421774	
	SM 5310 B-2011	Organic Carbon	1.8		mg C/L	P421795	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Big Coldwater Creek West fork upstream of Walling Rd

Collection Date/Time: 10/26/2022 13:00

Field ID: G4NW0436

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2365694	DEP SOP: NU-094-1	Color (true)	15		PCU	P421559	
	EPA 180.1 Rev. 2.0	Turbidity	3.0		NTU	P421566	
	EPA 300.0 Rev. 2.1	Chloride	6.9		mg Cl/L	P422163	
		Sulfate	2.1		mg SO4/L	P422167	
	SM 2320 B-2011	Total Alkalinity	3.2		mg CaCO3/L	P422004	
	SM 2540 C-2015	TDS	65		mg/L	P422070	
	SM 2540 D-2015	TSS	4	I	mg/L	P421783	
	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P422018	
2365695	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P421959	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.28		mg N/L	P421747	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.9		mg N/L	P421837	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P421774	
	SM 5310 B-2011	Organic Carbon	2.1		mg C/L	P421887	
2365707	EPA 8321B	2,4-D	0.0020	U	ug/L	P421666	
		Acesulfame K	0.10	U	ug/L	P421533	
		2,4,5-T	0.0040	U	ug/L	P421666	
		AMPA	0.10	U	ug/L	P421533	
		Acetaminophen	0.0080	U	ug/L	P421666	
		Acetamiprid	0.0020	U	ug/L	P421666	
		Endothall	0.25	U	ug/L	P421533	MS
		Glufosinate	0.10	U	ug/L	P421533	
		Glyphosate	0.10	U	ug/L	P421533	
		Afidopyropen	0.0020	U	ug/L	P421666	
		Bentazon	0.0041		ug/L	P421666	
		Sucralose	0.041		ug/L	P421533	
		Benzovindiflupyr	0.0020	U	ug/L	P421666	
		Carbamazepine	8.0E-04	U	ug/L	P421666	
		Clothianidin	0.0046	I	ug/L	P421666	
		Dinotefuran	0.0020	U	ug/L	P421666	
		Diuron	0.0020	U	ug/L	P421666	
		Fenuron	0.032	U	ug/L	P421666	
		Fluridone	8.0E-04	U	ug/L	P421666	
		Imazapyr	0.0040	U	ug/L	P421666	
		Hydrocodone	0.0020	U	ug/L	P421666	
		Ibuprofen	0.20	U	ug/L	P421666	
		Imidacloprid	0.0075	I	ug/L	P421666	
		Linuron	0.0040	U	ug/L	P421666	
		Mandestrobin	0.0020	U	ug/L	P421666	
		MCP	0.0040	U	ug/L	P421666	
		Naproxen	0.0080	U	ug/L	P421666	
		Primidone	0.0040	U	ug/L	P421666	
		Pyraclostrobin	0.0020	U	ug/L	P421666	
		Silvex	0.0040	U	ug/L	P421666	

Field ID: G4NW0436

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2365707	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P421666	
		Tolfenpyrad	0.0020	U	ug/L	P421666	
		Triclopyr	0.0040	U	ug/L	P421666	

Ref. Method and Comment:

DEP SOP: NU-094-1: Batch relative percent difference is unavailable because of analytical difficulties.

EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Bear Creek @ Forest Rd. 0.7 Miles West of Bear Lake **Collection Date/Time: 10/26/2022 12:15**

Field ID: G4NW0380

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2365709	EPA 200.7 Rev. 4.4	Calcium	0.91		mg/L	P421668	
		Iron	760		ug/L	P421668	
		Magnesium	0.51		mg/L	P421668	
		Potassium	0.30	U	mg/L	P421668	
		Sodium	1.8	I	mg/L	P421668	
		Strontium	3.0	I	ug/L	P421590	
		Tin	3.0	U	ug/L	P421590	
		Titanium	0.75	U	ug/L	P421590	
		Vanadium	2.0	U	ug/L	P421590	
		Zinc	5.0	U	ug/L	P421590	
	EPA 200.8 Rev. 5.4	Aluminum	27		ug/L	P421590	
		Antimony	0.050	U	ug/L	P421590	
		Arsenic	0.20		ug/L	P421590	
		Barium	7.22		ug/L	P421590	
		Beryllium	0.010	U	ug/L	P421590	
		Boron	8.3		ug/L	P421590	
		Cadmium	0.020	U	ug/L	P421590	
		Chromium	0.40	U	ug/L	P421590	
		Cobalt	0.150		ug/L	P421590	
		Copper	0.40	U	ug/L	P421590	
		Lead	0.20	U	ug/L	P421590	
		Manganese	16.4		ug/L	P421590	
		Molybdenum	0.15	U	ug/L	P421590	
		Nickel	0.50	U	ug/L	P421590	
		Selenium	0.20	U	ug/L	P421590	
		Silver	0.010	U	ug/L	P421590	
		Thallium	0.10	U	ug/L	P421590	
	SM 2340 B-2011	Hardness	4.4		mg/L	P421668	

Quality Assurance Report

Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P421559

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P421560

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P421562

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P421566

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P421590

Component	Result	Code	Units
Strontium	2.0	U	ug/L
Tin	3.0	U	ug/L
Titanium	0.75	U	ug/L
Vanadium	2.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P421668

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P421590

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P421590

Component	Result	Code	Units
Cobalt	0.020	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.10	U	ug/L
Molybdenum	0.15	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422163

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422167

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P421959

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421700

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421701

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421746

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421747

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P421837

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P421774

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

Reference Method: EPA 8321B
Batch ID: P421533

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: P421666

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	0.20	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: P422004

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

Reference Method: SM 2540 C-2015
Batch ID: P422070

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P421783

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P422018

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P421795

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

Reference Method: SM 5310 B-2011
Batch ID: P421887

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: P421559

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	91.0		P	90 - 110

Reference Method: DEP SOP: NU-094-1
Batch ID: P421560

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	91.7		P	90 - 110

Reference Method: DEP SOP: NU-094-1
Batch ID: P421562

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	91.8		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P421566

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P421590

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Strontium	111		P	85 - 115
Tin	113		P	85 - 115
Titanium	109		P	85 - 115
Vanadium	109		P	85 - 115
Zinc	109		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P421668

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	99.8		P	85 - 115
Iron	110		P	85 - 115
Magnesium	99.6		P	85 - 115
Potassium	108		P	85 - 115
Sodium	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P421590

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	93.8		P	85 - 115
Antimony	95.0		P	85 - 115
Arsenic	96.0		P	85 - 115
Barium	96.2		P	85 - 115
Beryllium	89.2		P	85 - 115
Boron	98.6		P	85 - 115
Cadmium	93.1		P	85 - 115
Chromium	101		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P421590

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cobalt	102		P	85 - 115
Copper	95.2		P	85 - 115
Lead	98.8		P	85 - 115
Manganese	98.8		P	85 - 115
Molybdenum	92.7		P	85 - 115
Nickel	96.2		P	85 - 115
Selenium	93.1		P	85 - 115
Silver	95.4		P	85 - 115
Thallium	94.9		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422163

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422167

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P421959

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.2		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421700

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421701

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421746

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.9		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421747

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.8		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P421837

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	96.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P421774

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

Reference Method: EPA 8321B
Batch ID: P421533

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	91.8		P	40 - 150
AMPA	104		P	40 - 150
Endothall	96.9		P	40 - 150
Glufosinate	105		P	40 - 150
Glyphosate	114		P	40 - 150
Sucralose	91.6		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P421666

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	90.0		P	40 - 150
2,4,5-T	74.0		P	40 - 150
Acetaminophen	92.8		P	30 - 150
Acetamiprid	89.9		P	40 - 150
Afidopyropen	70.3		P	30 - 150
Bentazon	106		P	30 - 150
Benzovindiflupyr	92.8		P	40 - 150
Carbamazepine	94.4		P	40 - 150
Clothianidin	101		P	40 - 150
Dinotefuran	106		P	40 - 150
Diuron	84.1		P	40 - 150
Fenuron	104		P	40 - 150
Fluridone	100		P	40 - 150
Hydrocodone	98.5		P	40 - 150
Ibuprofen	89.5		P	40 - 150
Imazapyr	88.6		P	40 - 150
Imidacloprid	97.4		P	40 - 150
Linuron	91.5		P	40 - 150
Mandestrobin	87.5		P	40 - 150
MCPP	102		P	40 - 150
Naproxen	73.3		P	40 - 150
Primidone	99.1		P	40 - 150
Pyraclostrobin	78.7		P	40 - 150
Silvex	75.4		P	40 - 150
Thiamethoxam	93.8		P	40 - 150
Tolfenpyrad	50.6		P	30 - 150
Triclopyr	78.7		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P422004

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.6		P	94 - 106

Reference Method: SM 2540 C-2015
Batch ID: P422070

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	97.2		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P421783

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	94.8		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P422018

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P421795

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.4		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P421887

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	100		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P421590

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2365533	Strontium	112	110	P/P	80 - 120
2365533	Tin	117	113	P/P	80 - 120
2365533	Titanium	112	109	P/P	80 - 120
2365533	Vanadium	111	107	P/P	80 - 120
2365533	Zinc	107	105	P/P	80 - 120
2365709	Strontium	112		P	80 - 120
2365709	Tin	115		P	80 - 120
2365709	Titanium	113		P	80 - 120
2365709	Vanadium	111		P	80 - 120
2365709	Zinc	112		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P421668

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2365710	Calcium	108		P	80 - 120
2365710	Iron	109		P	80 - 120
2365710	Magnesium	110		P	80 - 120
2365710	Potassium	109		P	80 - 120
2365710	Sodium	113		P	80 - 120
2366127	Calcium	95.2		P	80 - 120
2366127	Iron	110	109	P/P	80 - 120
2366127	Magnesium	96.1		P	80 - 120
2366127	Potassium	107	107	P/P	80 - 120
2366127	Sodium	106		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P421590

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2365533	Aluminum	90.8	93.6	P/P	80 - 120
2365533	Antimony	93.4	96.7	P/P	80 - 120
2365533	Arsenic	94.0	96.0	P/P	80 - 120
2365533	Barium	92.8	93.8	P/P	80 - 120
2365533	Beryllium	88.3	92.2	P/P	80 - 120
2365533	Boron	97.3	104	P/P	80 - 120
2365533	Cadmium	91.6	95.1	P/P	80 - 120
2365533	Chromium	97.7	99.9	P/P	80 - 120
2365533	Cobalt	98.7	101	P/P	80 - 120
2365533	Copper	90.8	91.8	P/P	80 - 120
2365533	Lead	96.5	98.3	P/P	80 - 120
2365533	Manganese	98.7	101	P/P	80 - 120
2365533	Molybdenum	91.3	93.5	P/P	80 - 120
2365533	Nickel	90.1	92.1	P/P	80 - 120
2365533	Selenium	90.8	90.3	P/P	80 - 120
2365533	Silver	92.2	93.8	P/P	80 - 120
2365533	Thallium	93.6	96.7	P/P	80 - 120
2365709	Aluminum	91.4		P	80 - 120
2365709	Antimony	94.3		P	80 - 120
2365709	Arsenic	94.7		P	80 - 120
2365709	Barium	95.8		P	80 - 120
2365709	Beryllium	91.8		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P421590

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2365709	Boron	95.0		P	80 - 120
2365709	Cadmium	92.8		P	80 - 120
2365709	Chromium	99.7		P	80 - 120
2365709	Cobalt	101		P	80 - 120
2365709	Copper	93.8		P	80 - 120
2365709	Lead	98.9		P	80 - 120
2365709	Manganese	99.6		P	80 - 120
2365709	Molybdenum	91.4		P	80 - 120
2365709	Nickel	94.5		P	80 - 120
2365709	Selenium	92.8		P	80 - 120
2365709	Silver	93.8		P	80 - 120
2365709	Thallium	94.0		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P422163

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2365359	Chloride	96.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P422167

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2365359	Sulfate	103		P	90 - 110
2365627	Sulfate	107		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P421959

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2365661	Ammonia-N	96.4	97.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P421700

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2365697	Kjeldahl Nitrogen	101	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P421701

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2365657	Kjeldahl Nitrogen	94.7	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P421746

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2365699	Kjeldahl Nitrogen	98.5	107	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P421747

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2365498	Kjeldahl Nitrogen	97.8	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P421837

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2365661	NO2NO3-N	98.5	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P421774

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2365697	Total-P	104	106	P/P	90 - 110

Reference Method: EPA 8321B
 Batch ID: P421533

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2365683	Acesulfame K	81.3	79.6	P/P	40 - 150
2365683	AMPA	100	103	P/P	40 - 150
2365683	Endothall	159	162	F/F	40 - 150
2365683	Glufosinate	102	100	P/P	40 - 150
2365683	Glyphosate	112	119	P/P	40 - 150
2365683	Sucralose	102	101	P/P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P421666

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2365604	2,4-D	113	118	P/P	40 - 150
2365604	2,4,5-T	91.0	86.3	P/P	40 - 150
2365604	Acetaminophen	106	112	P/P	30 - 150
2365604	Acetamiprid	109	110	P/P	40 - 150
2365604	Afidopyropen	92.3	89.9	P/P	30 - 150
2365604	Bentazon	125	116	P/P	30 - 150
2365604	Benzovindiflupyr	97.5	99.7	P/P	40 - 150
2365604	Carbamazepine	105	95.7	P/P	40 - 150
2365604	Clothianidin	114	112	P/P	40 - 150
2365604	Dinotefuran	132	137	P/P	40 - 150
2365604	Diuron	86.0	82.0	P/P	40 - 150
2365604	Fenuron	106	109	P/P	40 - 150
2365604	Fluridone	117	113	P/P	40 - 150
2365604	Hydrocodone	113	118	P/P	40 - 150
2365604	Ibuprofen	85.8	88.7	P/P	40 - 150
2365604	Imazapyr	115	107	P/P	40 - 150
2365604	Imidacloprid	125	122	P/P	40 - 150
2365604	Linuron	99.2	89.7	P/P	40 - 150
2365604	Mandestrobin	96.7	91.6	P/P	40 - 150
2365604	MCPP	117	113	P/P	40 - 150
2365604	Naproxen	75.0	79.1	P/P	40 - 150
2365604	Primidone	113	108	P/P	40 - 150
2365604	Pyraclostrobin	93.3	92.6	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P421666

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2365604	Silvex	91.0	85.2	P/P	40 - 150
2365604	Thiamethoxam	120	117	P/P	40 - 150
2365604	Tolfenpyrad	50.9	51.1	P/P	30 - 150
2365604	Triclopyr	91.3	83.9	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P422018

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367172	Fluoride	102	102	P/P	94 - 104

Reference Method: SM 5310 B-2011

Batch ID: P421795

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2365977	Organic Carbon	99.3		P	85 - 115

Reference Method: SM 5310 B-2011

Batch ID: P421887

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2366054	Organic Carbon	103		P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P421560

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365886	Color (true)	1.21	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P421566

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365493	Turbidity	5.83	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P421590

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365533	Strontium	1.65	Spike	P	0 - 20
2365533	Tin	3.11	Spike	P	0 - 20
2365533	Titanium	2.63	Spike	P	0 - 20
2365533	Vanadium	3.21	Spike	P	0 - 20
2365533	Zinc	2.11	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P421668

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2366127	Calcium	0.0432	Spike	P	0 - 20
2366127	Iron	0.736	Spike	P	0 - 20
2366127	Magnesium	0.619	Spike	P	0 - 20
2366127	Potassium	0.234	Spike	P	0 - 20
2366127	Sodium	0.337	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P421590

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365533	Aluminum	3.05	Spike	P	0 - 20
2365533	Antimony	3.48	Spike	P	0 - 20
2365533	Arsenic	2.07	Spike	P	0 - 20
2365533	Barium	0.577	Spike	P	0 - 20
2365533	Beryllium	4.30	Spike	P	0 - 20
2365533	Boron	6.06	Spike	P	0 - 20
2365533	Cadmium	3.68	Spike	P	0 - 20
2365533	Chromium	2.20	Spike	P	0 - 20
2365533	Cobalt	2.24	Spike	P	0 - 20
2365533	Copper	1.11	Spike	P	0 - 20
2365533	Lead	1.88	Spike	P	0 - 20
2365533	Manganese	2.27	Spike	P	0 - 20
2365533	Molybdenum	2.16	Spike	P	0 - 20
2365533	Nickel	2.16	Spike	P	0 - 20
2365533	Selenium	0.528	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P421590

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365533	Silver	1.79	Spike	P	0 - 20
2365533	Thallium	3.30	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422163

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365359	Chloride	0.0658	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422167

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365359	Sulfate	1.56	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P421959

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365661	Ammonia-N	0.734	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421700

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365697	Kjeldahl Nitrogen	0.839	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421701

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365657	Kjeldahl Nitrogen	4.38	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421746

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365699	Kjeldahl Nitrogen	7.62	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421747

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365498	Kjeldahl Nitrogen	6.49	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P421837

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365661	NO2NO3-N	0.509	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P421774

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365697	Total-P	2.02	Spike	P	0 - 20

Reference Method: EPA 8321B

Batch ID: P421533

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365683	Acesulfame K	2.12	Spike	P	0 - 30
2365683	AMPA	2.86	Spike	P	0 - 30
2365683	Endothall	1.92	Spike	P	0 - 30
2365683	Glufosinate	1.70	Spike	P	0 - 30
2365683	Glyphosate	6.51	Spike	P	0 - 30
2365683	Sucralose	0.481	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P421666

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365604	2,4-D	4.08	Spike	P	0 - 30
2365604	2,4,5-T	5.33	Spike	P	0 - 30
2365604	Acetaminophen	5.73	Spike	P	0 - 30
2365604	Acetamiprid	1.05	Spike	P	0 - 30
2365604	Afidopyropen	2.57	Spike	P	0 - 30
2365604	Bentazon	7.06	Spike	P	0 - 30
2365604	Benzovindiflupyr	2.29	Spike	P	0 - 30
2365604	Carbamazepine	9.38	Spike	P	0 - 30
2365604	Clothianidin	2.04	Spike	P	0 - 30
2365604	Dinotefuran	3.94	Spike	P	0 - 30
2365604	Diuron	4.70	Spike	P	0 - 30
2365604	Fenuron	2.56	Spike	P	0 - 30
2365604	Fluridone	3.54	Spike	P	0 - 30
2365604	Hydrocodone	3.68	Spike	P	0 - 30
2365604	Ibuprofen	3.35	Spike	P	0 - 30
2365604	Imazapyr	6.24	Spike	P	0 - 30
2365604	Imidacloprid	2.14	Spike	P	0 - 30
2365604	Linuron	9.96	Spike	P	0 - 30
2365604	Mandestrobin	5.49	Spike	P	0 - 30
2365604	MCPP	3.73	Spike	P	0 - 30
2365604	Naproxen	5.38	Spike	P	0 - 30
2365604	Primidone	4.72	Spike	P	0 - 30
2365604	Pyraclostrobin	0.682	Spike	P	0 - 30
2365604	Silvex	6.68	Spike	P	0 - 30
2365604	Thiamethoxam	2.35	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B

Batch ID: P421666

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365604	Tolfenpyrad	0.521	Spike	P	0 - 30
2365604	Triclopyr	8.50	Spike	P	0 - 30

Reference Method: SM 2320 B-2011

Batch ID: P422004

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367172	Total Alkalinity	1.12	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015

Batch ID: P422070

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365627	TDS	2.83	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011

Batch ID: P422018

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367172	Fluoride	0.463	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011

Batch ID: P421795

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365977	Organic Carbon	0.0888	Sample	P	0 - 20

Reference Method: SM 5310 B-2011

Batch ID: P421887

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2366054	Organic Carbon	0.0113	Sample	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2365707

Field Sample ID: G4NW0436

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	119	P	30 - 160
EPA 8321B	Acetaminophen-d4	105	P	30 - 160
EPA 8321B	Carbamazepine-d10	95.0	P	30 - 160
EPA 8321B	Diuron-d6	76.9	P	30 - 160
EPA 8321B	Endothall-d6	65.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	95.7	P	30 - 160
EPA 8321B	Ibuprofen-d3	86.7	P	30 - 160
EPA 8321B	Primidone-d5	123	P	30 - 160
EPA 8321B	Sucralose-d6	89.1	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A115529
Included Lab Sample IDs: 2365707

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	97.0	103	P/P	60 - 160
Endothall	69.0	83.4	P/P	60 - 160
Glufosinate	65.2	81.7	P/P	60 - 160
Glyphosate	97.2	102	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A115569
Included Lab Sample IDs: 2365707

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	97.2	94.2	P/P	60 - 160
Sucralose	94.5	89.3	P/P	60 - 160

Reference Method: DEP SOP: NU-094-1
Run ID: A115576
Included Lab Sample IDs: 2365692, 2365694, 2365696, 2365698

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	93.7	92.5	P/P	90 - 110
Color (true)	93.7	93.7	P/P	90 - 110
Color (true)	94.4	94.3	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A115579
Included Lab Sample IDs: 2365692, 2365694, 2365696, 2365698

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.0	98.0	P/P	95 - 105
Turbidity	98.0	98.5	P/P	95 - 105

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A115613
Included Lab Sample IDs: 2365708, 2365709, 2365710

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Strontium	101	101	P/P	90 - 110
Strontium	101	100	P/P	90 - 110
Tin	102	104	P/P	90 - 110
Tin	103	102	P/P	90 - 110
Titanium	100	101	P/P	90 - 110
Titanium	101	99.9	P/P	90 - 110
Vanadium	99.3	99.9	P/P	90 - 110
Vanadium	99.9	99.9	P/P	90 - 110
Zinc	100	99.8	P/P	90 - 110
Zinc	99.8	101	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A115652
Included Lab Sample IDs: 2365708, 2365709, 2365710

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A115652

Included Lab Sample IDs: 2365708, 2365709, 2365710

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	93.0	94.0	P/P	90 - 110
Aluminum	94.2	93.0	P/P	90 - 110
Antimony	91.3	91.6	P/P	90 - 110
Antimony	91.6	90.1	P/P	90 - 110
Arsenic	92.3	93.3	P/P	90 - 110
Arsenic	93.3	93.6	P/P	90 - 110
Barium	92.2	91.5	P/P	90 - 110
Barium	92.2	92.2	P/P	90 - 110
Beryllium	92.2	93.2	P/P	90 - 110
Beryllium	93.2	92.6	P/P	90 - 110
Boron	92.0	92.5	P/P	90 - 110
Boron	94.4	92.0	P/P	90 - 110
Cadmium	91.8	90.5	P/P	90 - 110
Cadmium	92.9	91.8	P/P	90 - 110
Copper	91.0	91.0	P/P	90 - 110
Copper	91.0	92.1	P/P	90 - 110
Molybdenum	90.6	91.2	P/P	90 - 110
Molybdenum	91.2	90.3	P/P	90 - 110
Nickel	91.8	93.3	P/P	90 - 110
Nickel	92.0	91.8	P/P	90 - 110
Selenium	90.7	92.6	P/P	90 - 110
Selenium	92.6	92.1	P/P	90 - 110
Silver	91.6	92.1	P/P	90 - 110
Silver	92.1	91.7	P/P	90 - 110
Thallium	90.5	90.3	P/P	90 - 110
Thallium	92.0	90.5	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A115662

Included Lab Sample IDs: 2365708, 2365709, 2365710

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	96.6	97.0	P/P	90 - 110
Iron	99.7	102	P/P	90 - 110
Magnesium	98.1	100	P/P	90 - 110
Potassium	101	102	P/P	90 - 110
Sodium	103	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A115670

Included Lab Sample IDs: 2365708, 2365709, 2365710

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	93.4	95.0	P/P	90 - 110
Chromium	95.0	97.0	P/P	90 - 110
Cobalt	95.5	96.4	P/P	90 - 110
Cobalt	96.4	98.3	P/P	90 - 110
Lead	94.5	94.7	P/P	90 - 110
Lead	94.7	94.5	P/P	90 - 110
Manganese	93.2	94.4	P/P	90 - 110
Manganese	94.4	94.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A115677
Included Lab Sample IDs: 2365707

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	96.0	98.0	P/P	50 - 150
2,4,5-T	123	107	P/P	50 - 150
Acetaminophen	107	102	P/P	60 - 160
Acetamiprid	111	111	P/P	50 - 150
Afidopyropen	113	110	P/P	50 - 150
Bentazon	121	118	P/P	50 - 160
Benzovindiflupyr	124	119	P/P	50 - 150
Carbamazepine	117	117	P/P	60 - 150
Clothianidin	125	114	P/P	60 - 150
Dinotefuran	125	121	P/P	50 - 150
Diuron	111	107	P/P	60 - 160
Fenuron	115	106	P/P	60 - 150
Fluridone	122	121	P/P	60 - 160
Hydrocodone	114	120	P/P	60 - 150
Ibuprofen	101	88.7	P/P	50 - 160
Imazapyr	110	110	P/P	50 - 150
Imidacloprid	98.3	103	P/P	60 - 150
Linuron	120	117	P/P	60 - 150
Mandestrobin	110	111	P/P	50 - 150
MCPP	115	110	P/P	50 - 150
Naproxen	102	123	P/P	50 - 160
Primidone	123	116	P/P	60 - 150
Pyraclostrobin	114	117	P/P	60 - 150
Silvex	94.5	105	P/P	50 - 150
Thiamethoxam	121	117	P/P	50 - 150
Tolfenpyrad	122	119	P/P	60 - 150
Triclopyr	105	105	P/P	50 - 150

Reference Method: SM 5310 B-2011
Run ID: A115691
Included Lab Sample IDs: 2365697, 2365699

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.7	96.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A115713
Included Lab Sample IDs: 2365693, 2365695, 2365697, 2365699

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	95.0	94.5	P/P	90 - 110
NO2NO3-N	96.5	95.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A115721
Included Lab Sample IDs: 2365693, 2365695, 2365697, 2365699

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.2	99.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A115722

Included Lab Sample IDs: 2365693, 2365697

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.7	91.9	P/P	90 - 110
Kjeldahl Nitrogen	99.6	98.7	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A115735

Included Lab Sample IDs: 2365693, 2365695

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.0	98.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A115748

Included Lab Sample IDs: 2365693, 2365695, 2365697, 2365699

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.3	99.4	P/P	90 - 110
Ammonia-N	99.9	99.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A115762

Included Lab Sample IDs: 2365695, 2365699

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	92.2	96.8	P/P	90 - 110
Kjeldahl Nitrogen	100	98.0	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A115774

Included Lab Sample IDs: 2365692, 2365694, 2365696, 2365698

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.0	95.4	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A115774

Included Lab Sample IDs: 2365692, 2365694, 2365696, 2365698

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A115800

Included Lab Sample IDs: 2365692, 2365694, 2365696, 2365698

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.1	96.3	P/P	90 - 110
Sulfate	103	99.4	P/P	90 - 110

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
DEP SOP: NU-094-1	Color (true)	91.0						
	Color (true)	91.7					1.21	
	Color (true)	91.8						
EPA 180.1 Rev. 2.0	Turbidity	99.4					5.83	
EPA 200.7 Rev. 4.4	Calcium	99.8	108	95.2				0.0432
	Iron	110	109	110	109			0.736
	Magnesium	99.6	110	96.1				0.619
	Potassium	108	109	107	107			0.234
	Sodium	103	113	106				0.337
	Strontium	111	112	112	110			1.65
	Tin	113	117	113	115			3.11
	Titanium	109	112	109	113			2.63
	Vanadium	109	111	107	111			3.21
	Zinc	109	107	105	112			2.11
EPA 200.8 Rev. 5.4	Aluminum	93.8	90.8	93.6	91.4			3.05
	Antimony	95.0	93.4	96.7	94.3			3.48
	Arsenic	96.0	94.0	96.0	94.7			2.07
	Barium	96.2	92.8	93.8	95.8			0.577
	Beryllium	89.2	88.3	92.2	91.8			4.30
	Boron	98.6	97.3	104	95.0			6.06
	Cadmium	93.1	91.6	95.1	92.8			3.68
	Chromium	101	97.7	99.9	99.7			2.20
	Cobalt	102	98.7	101	101			2.24
	Copper	95.2	90.8	91.8	93.8			1.11
	Lead	98.8	96.5	98.3	98.9			1.88
	Manganese	98.8	98.7	101	99.6			2.27
	Molybdenum	92.7	91.3	93.5	91.4			2.16
	Nickel	96.2	90.1	92.1	94.5			2.16
	Selenium	93.1	90.8	90.3	92.8			0.528
	Silver	95.4	92.2	93.8	93.8			1.79
	Thallium	94.9	93.6	96.7	94.0			3.30
EPA 300.0 Rev. 2.1	Chloride	103	96.9				0.0658	
	Sulfate	107	103	107			1.56	
EPA 350.1 Rev. 2.0	Ammonia-N	96.2	96.4	97.2				0.734
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100	101	100				0.839
	Kjeldahl Nitrogen	101	94.7	102				4.38
	Kjeldahl Nitrogen	99.9	98.5	107				7.62
	Kjeldahl Nitrogen	99.8	97.8	104				6.49
EPA 353.2 Rev. 2.0	NO2NO3-N	96.5	98.5	98.0				0.509
EPA 365.1 Rev. 2.0	Total-P	104	104	106				2.02
EPA 8321B	2,4-D	90.0	113	118				4.08
	2,4,5-T	74.0	91.0	86.3				5.33
	Acesulfame K	91.8	81.3	79.6				2.12
	Acetaminophen	92.8	106	112				5.73
	Acetamiprid	89.9	109	110				1.05
	Afidopyropen	70.3	92.3	89.9				2.57
	AMPA	104	100	103				2.86
	Bentazon	106	125	116				7.06
	Benzovindiflupyr	92.8	97.5	99.7				2.29
	Carbamazepine	94.4	105	95.7				9.38
	Clothianidin	101	114	112				2.04
	Dinotefuran	106	132	137				3.94
	Diuron	84.1	86.0	82.0				4.70
	Endothall	96.9	159	162				1.92

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Fenuron	104	106	109		2.56
	Fluridone	100	117	113		3.54
	Glufosinate	105	102	100		1.70
	Glyphosate	114	112	119		6.51
	Hydrocodone	98.5	113	118		3.68
	Ibuprofen	89.5	85.8	88.7		3.35
	Imazapyr	88.6	115	107		6.24
	Imidacloprid	97.4	125	122		2.14
	Linuron	91.5	99.2	89.7		9.96
	Mandestrobin	87.5	96.7	91.6		5.49
	MCPP	102	117	113		3.73
	Naproxen	73.3	75.0	79.1		5.38
	Primidone	99.1	113	108		4.72
	Pyraclostrobin	78.7	93.3	92.6		0.682
	Silvex	75.4	91.0	85.2		6.68
	Sucralose	91.6	102	101		0.481
	Thiamethoxam	93.8	120	117		2.35
	Tolfenpyrad	50.6	50.9	51.1		0.521
	Triclopyr	78.7	91.3	83.9		8.50
SM 2320 B-2011	Total Alkalinity	97.6			1.12	
SM 2540 C-2015	TDS	97.2			2.83	
SM 2540 D-2015	TSS	94.8				
SM 4500-F- C-2011	Fluoride	102	102	102		0.463
SM 5310 B-2011	Organic Carbon	97.4	99.3		0.0888	
	Organic Carbon	100	103		0.0113	

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2365692, 2365694, 2365696, 2365698
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2365692, 2365694, 2365696, 2365698
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2365708, 2365709, 2365710
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2365708, 2365709, 2365710
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2365692, 2365694, 2365696, 2365698
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2365692, 2365694, 2365696, 2365698
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2365693, 2365695, 2365697, 2365699
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2365693, 2365695, 2365697, 2365699
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2365693, 2365695, 2365697, 2365699
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2365693, 2365695, 2365697, 2365699
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2365707
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2365692, 2365694, 2365696, 2365698
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2365708, 2365709, 2365710
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2365692, 2365694, 2365696, 2365698
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2365692, 2365694, 2365696, 2365698
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2365692, 2365694, 2365696, 2365698
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2365693, 2365695, 2365697, 2365699

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	10/27/2022			10/27/2022 14:47	Chandler E Cox	2365694, 2365696
	10/27/2022			10/27/2022 14:51	Chandler E Cox	2365698
	10/27/2022			10/27/2022 15:10	Chandler E Cox	2365692
	10/27/2022			10/27/2022 14:02	Anna M. Plaviak	2365694
EPA 180.1 Rev. 2.0	10/27/2022			10/27/2022 14:03	Anna M. Plaviak	2365696
	10/27/2022			10/27/2022 14:04	Anna M. Plaviak	2365698
	10/27/2022			10/27/2022 14:38	Anna M. Plaviak	2365692
	10/27/2022	10/28/2022 11:25	George D Taylor	10/28/2022 23:55	McKinley C Carter	2365708
EPA 200.7 Rev. 4.4	10/27/2022	10/28/2022 11:25	George D Taylor	10/29/2022 00:30	McKinley C Carter	2365709
	10/27/2022	10/28/2022 11:25	George D Taylor	10/29/2022 00:51	McKinley C Carter	2365710
	10/27/2022	10/31/2022 12:20	George D Taylor	11/01/2022 14:29	Betina Topolski	2365708
	10/27/2022	10/31/2022 12:20	George D Taylor	11/01/2022 14:33	Betina Topolski	2365709
EPA 200.8 Rev. 5.4	10/27/2022	10/31/2022 12:20	George D Taylor	11/01/2022 14:38	Betina Topolski	2365710
	10/27/2022	10/28/2022 11:25	George D Taylor	11/01/2022 02:00	Emily M Philpot	2365708
	10/27/2022	10/28/2022 11:25	George D Taylor	11/01/2022 02:09	Emily M Philpot	2365709
	10/27/2022	10/28/2022 11:25	George D Taylor	11/01/2022 02:58	Emily M Philpot	2365710
EPA 200.8 Rev. 5.4	10/27/2022	10/28/2022 11:25	George D Taylor	11/01/2022 23:20	Emily M Philpot	2365708
	10/27/2022	10/28/2022 11:25	George D Taylor	11/01/2022 23:27	Emily M Philpot	2365709
	10/27/2022	10/28/2022 11:25	George D Taylor	11/01/2022 23:59	Emily M Philpot	2365710
	10/27/2022	10/28/2022 11:25	George D Taylor	11/01/2022 23:59	Emily M Philpot	2365710
EPA 300.0 Rev. 2.1	10/27/2022			11/09/2022 05:27	Anna M. Plaviak	2365692
	10/27/2022			11/09/2022 05:42	Anna M. Plaviak	2365694
	10/27/2022			11/09/2022 05:57	Anna M. Plaviak	2365696
	10/27/2022			11/09/2022 06:13	Anna M. Plaviak	2365698
EPA 350.1 Rev. 2.0	10/27/2022			11/04/2022 15:56	Ping Hua	2365697
	10/27/2022			11/04/2022 15:57	Ping Hua	2365699
	10/27/2022			11/04/2022 16:29	Ping Hua	2365693
	10/27/2022			11/04/2022 16:30	Ping Hua	2365695
EPA 351.2 Rev. 2.0	10/27/2022	11/01/2022 12:07	Alexandra J Mattheus	11/03/2022 12:55	Samantha L Bates	2365697
	10/27/2022	11/01/2022 12:07	Alexandra J Mattheus	11/03/2022 13:31	Samantha L Bates	2365693
	10/27/2022	11/02/2022 11:45	Alexandra J Mattheus	11/04/2022 14:33	Alexandra J Mattheus	2365699
	10/27/2022	11/02/2022 11:45	Alexandra J Mattheus	11/04/2022 15:09	Alexandra J Mattheus	2365695
EPA 353.2 Rev. 2.0	10/27/2022			11/03/2022 10:21	Beverly Y. Sanders	2365693
	10/27/2022			11/03/2022 10:41	Beverly Y. Sanders	2365695
	10/27/2022			11/03/2022 10:42	Beverly Y. Sanders	2365697
	10/27/2022			11/03/2022 10:43	Beverly Y. Sanders	2365699
EPA 365.1 Rev. 2.0	10/27/2022	11/02/2022 17:10	Adam P Silver	11/03/2022 13:29	Simonne.V. Calhoun	2365697
	10/27/2022	11/02/2022 17:10	Adam P Silver	11/03/2022 13:31	Simonne.V. Calhoun	2365693
	10/27/2022	11/02/2022 17:10	Adam P Silver	11/03/2022 13:32	Simonne.V. Calhoun	2365695
	10/27/2022	11/02/2022 17:10	Adam P Silver	11/03/2022 13:33	Simonne.V. Calhoun	2365699
EPA 8321B	10/27/2022	10/28/2022 13:00	Umesh Chiluwal	10/28/2022 17:03	Umesh Chiluwal	2365707

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	10/27/2022	10/28/2022 13:00	Umesh Chiluwal	10/29/2022 05:37	Umesh Chiluwal	2365707
	10/27/2022	11/01/2022 09:30	June Rhew	11/01/2022 19:49	Juyoung Kim	2365707
SM 2320 B-2011	10/27/2022			11/05/2022 06:58	Dale L. Simmons	2365692
	10/27/2022			11/05/2022 07:08	Dale L. Simmons	2365694
	10/27/2022			11/05/2022 07:19	Dale L. Simmons	2365696
	10/27/2022			11/05/2022 07:29	Dale L. Simmons	2365698
SM 2340 B-2011	10/27/2022			11/01/2022 14:29	Betina Topolski	2365708
	10/27/2022			11/01/2022 14:33	Betina Topolski	2365709
	10/27/2022			11/01/2022 14:38	Betina Topolski	2365710
SM 2540 C-2015	10/27/2022			10/28/2022 15:58	Yijie Li	2365692, 2365694, 2365696, 2365698
SM 2540 D-2015	10/27/2022			10/28/2022 15:58	Yijie Li	2365692, 2365694, 2365696, 2365698
SM 4500-F- C-2011	10/27/2022			11/05/2022 06:58	Dale L. Simmons	2365692
	10/27/2022			11/05/2022 07:08	Dale L. Simmons	2365694
	10/27/2022			11/05/2022 07:19	Dale L. Simmons	2365696
	10/27/2022			11/05/2022 07:29	Dale L. Simmons	2365698
SM 5310 B-2011	10/27/2022			11/02/2022 03:07	Khloe J Berg	2365697
	10/27/2022			11/02/2022 03:27	Khloe J Berg	2365699
	10/27/2022			11/03/2022 09:34	Khloe J Berg	2365693
	10/27/2022			11/03/2022 09:54	Khloe J Berg	2365695