

Chemical Analysis Report

WAS-SECT-2022-12-13-01

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

Event Description: **Merrit's Mill Pond BMAP**
Request ID: **RQ-2022-12-05-20**
Customer: **WAS-SECT**
Project ID: **BMAP**

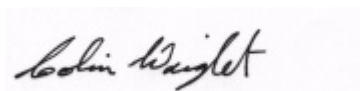
Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
Tallahassee, FL 32399
Attn: Curtis Musson

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Report Comment: Unauthorized to re-upload samples with Prep Batch P423907.

Certified by: Colin Wright, Program Administrator

Date Certified: 13-JAN-2023 11:37

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: Merritts Mill Pond 500 meters upstream of dam Collection Date/Time: 12/13/2022 11:55

Field ID: G2WA0009

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2374868	DEP SOP: NU-094-1	Color (true)	2.5	U	PCU	P423540	
	EPA 180.1 Rev. 2.0	Turbidity	1.1		NTU	P423536	
	EPA 300.0 Rev. 2.1	Chloride	5.4		mg Cl/L	P423714	
		Sulfate	1.5		mg SO4/L	P423717	
	SM 2320 B-2011	Total Alkalinity	120		mg CaCO3/L	P423927	
	SM 2540 C-2015	TDS	144		mg/L	P423893	
	SM 2540 D-2015	TSS	2	I	mg/L	P423785	
	SM 4500-F- C-2011	Fluoride	0.041	I	mg F/L	P423931	
2374870	EPA 350.1 Rev. 2.0	Ammonia-N	0.090		mg N/L	P424100	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.24		mg N/L	P423750	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.3		mg N/L	P423590	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P423567	
	SM 5310 B-2011	Organic Carbon	1.1		mg C/L	P423708	
2374872	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.006	I	mg P/L	P423550	
2374876	EPA 8321B	2,4-D	0.0020	U	ug/L	P423422	
		Acesulfame K	0.10	U	ug/L	P423367	
		2,4,5-T	0.0040	U	ug/L	P423422	
		AMPA	0.10	U	ug/L	P423367	
		Acetaminophen	0.0080	U	ug/L	P423422	
		Acetamiprid	0.0020	U	ug/L	P423422	
		Endothall	0.25	U	ug/L	P423367	
		Glufosinate	0.10	U	ug/L	P423367	
		Glyphosate	0.10	U	ug/L	P423367	
		Afidopyrophen	0.0020	U	ug/L	P423422	
		Bentazon	0.0023	I	ug/L	P423422	
		Sucralose	0.012	I	ug/L	P423367	
		Benzovindiflupyr	0.0020	U	ug/L	P423422	
		Carbamazepine	8.0E-04	U	ug/L	P423422	
		Clothianidin	0.0020	U	ug/L	P423422	
		Dinotefuran	0.0028	I	ug/L	P423422	
		Diuron	0.0020	U	ug/L	P423422	
		Fenuron	0.032	U	ug/L	P423422	
		Fluridone	8.0E-04	U	ug/L	P423422	
		Imazapyr	0.0040	U	ug/L	P423422	
		Hydrocodone	0.0020	U	ug/L	P423422	
		Ibuprofen	0.20	U	ug/L	P423422	
		Imidacloprid	0.0020	U	ug/L	P423422	
		Linuron	0.0040	U	ug/L	P423422	
		Mandestrobin	0.0020	U	ug/L	P423422	
		MCPD	0.0040	U	ug/L	P423422	
		Naproxen	0.0080	U	ug/L	P423422	
		Primidone	0.0040	U	ug/L	P423422	
		Pyraclostrobin	0.0020	U	ug/L	P423422	

Field ID: G2WA0009

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2374876	EPA 8321B	Silvex	0.0040	U	ug/L	P423422	
		Thiamethoxam	0.0020	U	ug/L	P423422	
		Tolfenpyrad	0.0020	U	ug/L	P423422	
		Triclopyr	0.0040	U	ug/L	P423422	
2374878	EPA 200.7 Rev. 4.4	Calcium	51.2		mg/L	P423520	
		Iron	68	I	ug/L	P423520	
		Magnesium	2.92		mg/L	P423520	
		Potassium	0.48	I	mg/L	P423520	
		Sodium	2.1		mg/L	P423520	
		Strontium	42.8		ug/L	P423520	
		Tin	3.0	U	ug/L	P423520	
		Titanium	0.78	I	ug/L	P423520	
		Vanadium	2.0	U	ug/L	P423520	
		Zinc	5.0	U	ug/L	P423520	
	EPA 200.8 Rev. 5.4	Aluminum	12	I	ug/L	P423520	
		Antimony	0.050	U	ug/L	P423520	
		Arsenic	0.35		ug/L	P423520	
		Barium	8.48		ug/L	P423520	
		Beryllium	0.010	U	ug/L	P423520	
		Boron	9.0		ug/L	P423520	
		Cadmium	0.020	U	ug/L	P423520	
		Chromium	1.3	I	ug/L	P423520	
		Cobalt	0.020	U	ug/L	P423520	
		Copper	0.40	U	ug/L	P423520	
		Lead	0.20	U	ug/L	P423520	
		Manganese	4.11		ug/L	P423520	
		Molybdenum	0.15	U	ug/L	P423520	
		Nickel	0.50	U	ug/L	P423520	
		Selenium	0.20	U	ug/L	P423520	
		Silver	0.010	U	ug/L	P423520	
		Thallium	0.10	U	ug/L	P423520	
		Hardness	140		mg/L	P423520	

Ref. Method and Comment:

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

Sample Location: Merritts Mill Pond mid under powerlines

Collection Date/Time: 12/13/2022 12:23

Field ID: G2WA0008

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2374869	DEP SOP: NU-094-1	Color (true)	2.5	U	PCU	P423540	
	EPA 180.1 Rev. 2.0	Turbidity	0.45	I	NTU	P423536	
	EPA 300.0 Rev. 2.1	Chloride	5.5		mg Cl/L	P423714	
		Sulfate	1.6		mg SO4/L	P423717	
	SM 2320 B-2011	Total Alkalinity	119		mg CaCO3/L	P423927	
	SM 2540 C-2015	TDS	154	A	mg/L	P423893	
	SM 2540 D-2015	TSS	2	UA	mg/L	P423786	
	SM 4500-F- C-2011	Fluoride	0.040	I	mg F/L	P423931	
2374871	EPA 350.1 Rev. 2.0	Ammonia-N	0.046		mg N/L	P424100	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.21		mg N/L	P423750	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.8		mg N/L	P423590	
	EPA 365.1 Rev. 2.0	Total-P	0.027		mg P/L	P423567	
	SM 5310 B-2011	Organic Carbon	0.69	I	mg C/L	P423708	
2374873	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.018		mg P/L	P423550	
2374877	EPA 8321B	2,4-D	0.0020	U	ug/L	P423422	
		Acesulfame K	0.10	U	ug/L	P423367	
		2,4,5-T	0.0040	U	ug/L	P423422	
		AMPA	0.10	U	ug/L	P423367	
		Acetaminophen	0.0080	U	ug/L	P423422	
		Acetamiprid	0.0020	U	ug/L	P423422	
		Endothall	0.25	U	ug/L	P423367	
		Glufosinate	0.10	U	ug/L	P423367	
		Glyphosate	0.10	U	ug/L	P423367	
		Afidopyrophen	0.0020	U	ug/L	P423422	
		Bentazon	0.0028	I	ug/L	P423422	
		Sucralose	0.017	I	ug/L	P423367	
		Benzovindiflupyr	0.0020	U	ug/L	P423422	
		Carbamazepine	8.0E-04	U	ug/L	P423422	
		Clothianidin	0.0020	U	ug/L	P423422	
		Dinotefuran	0.0031	I	ug/L	P423422	
		Diuron	0.0020	U	ug/L	P423422	
		Fenuron	0.032	U	ug/L	P423422	
		Fluridone	8.0E-04	U	ug/L	P423422	
		Imazapyr	0.0040	U	ug/L	P423422	
		Hydrocodone	0.0020	U	ug/L	P423422	
		Ibuprofen	0.20	U	ug/L	P423422	
		Imidacloprid	0.0020	U	ug/L	P423422	
		Linuron	0.0040	U	ug/L	P423422	
		Mandestrobin	0.0020	U	ug/L	P423422	
		MCP	0.0040	U	ug/L	P423422	
		Naproxen	0.0080	U	ug/L	P423422	
		Primidone	0.0040	U	ug/L	P423422	
		Pyraclostrobin	0.0020	U	ug/L	P423422	

Field ID: G2WA0008

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2374877	EPA 8321B	Silvex	0.0040	U	ug/L	P423422	
		Thiamethoxam	0.0020	U	ug/L	P423422	
		Tolfenpyrad	0.0020	U	ug/L	P423422	
		Triclopyr	0.0040	U	ug/L	P423422	
2374879	EPA 200.7 Rev. 4.4	Calcium	48.4		mg/L	P423520	
		Iron	30	U	ug/L	P423520	
		Magnesium	2.72		mg/L	P423520	
		Potassium	0.43	I	mg/L	P423520	
		Sodium	2.0		mg/L	P423520	
		Strontium	40.2		ug/L	P423520	
		Tin	3.0	U	ug/L	P423520	
		Titanium	0.75	U	ug/L	P423520	
		Vanadium	2.0	U	ug/L	P423520	
		Zinc	5.0	U	ug/L	P423520	
	EPA 200.8 Rev. 5.4	Aluminum	15	I	ug/L	P423520	
		Antimony	0.050	U	ug/L	P423520	
		Arsenic	0.32		ug/L	P423520	
		Barium	7.94		ug/L	P423520	
		Beryllium	0.010	U	ug/L	P423520	
		Boron	9.3		ug/L	P423520	
		Cadmium	0.020	U	ug/L	P423520	
		Chromium	0.76	I	ug/L	P423520	
		Cobalt	0.020	U	ug/L	P423520	
		Copper	0.40	U	ug/L	P423520	
		Lead	0.20	U	ug/L	P423520	
		Manganese	2.33		ug/L	P423520	
		Molybdenum	0.15	U	ug/L	P423520	
		Nickel	0.50	U	ug/L	P423520	
		Selenium	0.20	U	ug/L	P423520	
		Silver	0.010	U	ug/L	P423520	
		Thallium	0.10	U	ug/L	P423520	
		Hardness	132		mg/L	P423520	

Ref. Method and Comment:

SM 2540 D-2015: 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: P423540

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P423536

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P423520

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: P423520

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P423714

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P423717

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424100

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423750

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P423590

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P423567

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P423550

Component	Result	Code	Units
O-Phosphate-P	0.004	U	mg P/L

Reference Method: EPA 8321B
Batch ID: P423367

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: P423422

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P423422

Component	Result	Code	Units
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

Reference Method: SM 2320 B-2011

Batch ID: P423927

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

Reference Method: SM 2540 C-2015

Batch ID: P423893

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015

Batch ID: P423785

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2015

Batch ID: P423786

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011

Batch ID: P423931

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P423708

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: P423540

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P423536

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P423520

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	101		P	80 - 120
Iron	102		P	80 - 120
Magnesium	98.2		P	80 - 120
Potassium	94.7		P	80 - 120
Sodium	99.6		P	80 - 120
Strontium	97.3		P	80 - 120
Tin	95.7		P	80 - 120
Titanium	99.5		P	80 - 120
Vanadium	98.4		P	80 - 120
Zinc	98.6		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P423520

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	105		P	85 - 115
Antimony	104		P	85 - 115
Arsenic	105		P	85 - 115
Barium	104		P	85 - 115
Beryllium	96.0		P	85 - 115
Boron	106		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	99.8		P	85 - 115
Cobalt	102		P	85 - 115
Copper	105		P	85 - 115
Lead	94.0		P	85 - 115
Manganese	102		P	85 - 115
Molybdenum	101		P	85 - 115
Nickel	106		P	85 - 115
Selenium	104		P	85 - 115
Silver	102		P	85 - 115
Thallium	102		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P423714

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P423717

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424100

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: P423750

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P423590

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P423567

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P423550

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

Reference Method: EPA 8321B
Batch ID: P423367

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	97.0		P	40 - 150
AMPA	90.7		P	40 - 150
Endothall	101		P	40 - 150
Glufosinate	96.9		P	40 - 150
Glyphosate	96.7		P	40 - 150
Sucralose	94.9		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P423422

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	77.3		P	40 - 150
2,4,5-T	78.5		P	40 - 150
Acetaminophen	103		P	30 - 150
Acetamiprid	81.2		P	40 - 150
Afidopyropen	60.1		P	30 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P423422

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bentazon	102		P	30 - 150
Benzovindiflupyr	92.9		P	40 - 150
Carbamazepine	95.3		P	40 - 150
Clothianidin	106		P	40 - 150
Dinotefuran	105		P	40 - 150
Diuron	92.2		P	40 - 150
Fenuron	112		P	40 - 150
Fluridone	99.2		P	40 - 150
Hydrocodone	105		P	40 - 150
Ibuprofen	66.5		P	40 - 150
Imazapyr	89.6		P	40 - 150
Imidacloprid	114		P	40 - 150
Linuron	84.8		P	40 - 150
Mandestrobin	94.8		P	40 - 150
MCPP	90.0		P	40 - 150
Naproxen	63.5		P	40 - 150
Primidone	103		P	40 - 150
Pyraclostrobin	89.5		P	40 - 150
Silvex	78.9		P	40 - 150
Thiamethoxam	101		P	40 - 150
Tolfenpyrad	42.6		P	30 - 150
Triclopyr	90.0		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P423927

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

Reference Method: SM 2540 C-2015
Batch ID: P423893

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	92.2		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P423785

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	101		P	85 - 106

Reference Method: SM 2540 D-2015
Batch ID: P423786

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	95.2		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P423931

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P423708

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P423520

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2374640	Calcium	107		P	80 - 120
2374640	Iron	104	101	P/P	80 - 120
2374640	Magnesium	99.9	96.0	P/P	80 - 120
2374640	Potassium	101	97.0	P/P	80 - 120
2374640	Sodium	103	100	P/P	80 - 120
2374640	Strontium	99.9	97.7	P/P	80 - 120
2374640	Tin	96.0	91.9	P/P	80 - 120
2374640	Titanium	102	98.4	P/P	80 - 120
2374640	Vanadium	99.9	95.5	P/P	80 - 120
2374640	Zinc	98.6	94.4	P/P	80 - 120
2374878	Calcium	94.6		P	80 - 120
2374878	Iron	102		P	80 - 120
2374878	Magnesium	97.4		P	80 - 120
2374878	Potassium	98.9		P	80 - 120
2374878	Sodium	102		P	80 - 120
2374878	Strontium	99.4		P	80 - 120
2374878	Tin	97.3		P	80 - 120
2374878	Titanium	102		P	80 - 120
2374878	Vanadium	102		P	80 - 120
2374878	Zinc	100		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P423520

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2374640	Aluminum	104	105	P/P	80 - 120
2374640	Antimony	103	104	P/P	80 - 120
2374640	Arsenic	103	104	P/P	80 - 120
2374640	Barium	105	108	P/P	80 - 120
2374640	Beryllium	97.2	97.6	P/P	80 - 120
2374640	Boron	105	105	P/P	80 - 120
2374640	Cadmium	109	110	P/P	80 - 120
2374640	Chromium	105	107	P/P	80 - 120
2374640	Cobalt	103	103	P/P	80 - 120
2374640	Copper	96.5	96.4	P/P	80 - 120
2374640	Lead	95.9	96.8	P/P	80 - 120
2374640	Manganese	107	107	P/P	80 - 120
2374640	Molybdenum	106	108	P/P	80 - 120
2374640	Nickel	106	106	P/P	80 - 120
2374640	Selenium	103	102	P/P	80 - 120
2374640	Silver	103	105	P/P	80 - 120
2374640	Thallium	105	107	P/P	80 - 120
2374878	Aluminum	102		P	80 - 120
2374878	Antimony	106		P	80 - 120
2374878	Arsenic	106		P	80 - 120
2374878	Barium	105		P	80 - 120
2374878	Beryllium	96.6		P	80 - 120
2374878	Boron	103		P	80 - 120
2374878	Cadmium	110		P	80 - 120
2374878	Chromium	101		P	80 - 120
2374878	Cobalt	102		P	80 - 120
2374878	Copper	104		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P423520

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2374878	Lead	96.8		P	80 - 120
2374878	Manganese	105		P	80 - 120
2374878	Molybdenum	108		P	80 - 120
2374878	Nickel	105		P	80 - 120
2374878	Selenium	106		P	80 - 120
2374878	Silver	105		P	80 - 120
2374878	Thallium	105		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P423714

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2374882	Chloride	95.2		P	90 - 110
2375057	Chloride	98.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P423717

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2374882	Sulfate	96.6		P	90 - 110
2375057	Sulfate	95.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424100

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2374775	Ammonia-N	99.8	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423750

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2375236	Kjeldahl Nitrogen	105	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P423590

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2374946	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P423567

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2374883	Total-P	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P423550

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2374872	O-Phosphate-P	97.7	99.4	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P423367

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2374117	Acesulfame K	65.5	58.1	P/P	40 - 150
2374117	AMPA	78.4	77.8	P/P	40 - 150
2374117	Endothall	107	106	P/P	40 - 150
2374117	Glufosinate	97.2	97.3	P/P	40 - 150
2374117	Glyphosate	97.3	103	P/P	40 - 150
2374117	Sucralose	83.2	101	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P423422

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2374876	2,4-D	82.5	83.5	P/P	40 - 150
2374876	2,4,5-T	82.2	84.3	P/P	40 - 150
2374876	Acetaminophen	102	98.7	P/P	30 - 150
2374876	Acetamiprid	85.4	87.4	P/P	40 - 150
2374876	Afidopyropen	72.9	70.9	P/P	30 - 150
2374876	Bentazon	88.8	96.2	P/P	30 - 150
2374876	Benzovindiflupyr	85.5	84.3	P/P	40 - 150
2374876	Carbamazepine	90.5	89.1	P/P	40 - 150
2374876	Clothianidin	98.7	98.6	P/P	40 - 150
2374876	Dinotefuran	97.3	97.8	P/P	40 - 150
2374876	Diuron	80.2	78.1	P/P	40 - 150
2374876	Fenuron	99.8	102	P/P	40 - 150
2374876	Fluridone	91.0	90.2	P/P	40 - 150
2374876	Hydrocodone	95.4	93.5	P/P	40 - 150
2374876	Ibuprofen	68.8	67.1	P/P	40 - 150
2374876	Imazapyr	91.3	87.5	P/P	40 - 150
2374876	Imidacloprid	109	116	P/P	40 - 150
2374876	Linuron	82.3	78.3	P/P	40 - 150
2374876	Mandestrobin	88.4	84.1	P/P	40 - 150
2374876	MCP	95.7	93.6	P/P	40 - 150
2374876	Naproxen	84.8	96.4	P/P	40 - 150
2374876	Primidone	89.5	92.1	P/P	40 - 150
2374876	Pyraclostrobin	63.3	76.6	P/P	40 - 150
2374876	Silvex	80.0	84.4	P/P	40 - 150
2374876	Thiamethoxam	96.4	96.9	P/P	40 - 150
2374876	Tolfenpyrad	37.6	47.7	P/P	30 - 150
2374876	Triclopyr	91.5	88.0	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P423931

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2374629	Fluoride	98.1	97.5	P/P	94 - 104

Reference Method: SM 5310 B-2011

Batch ID: P423708

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2374775	Organic Carbon	99.2	99.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P423540

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2374911	Color (true)	2.36	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P423536

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2374898	Turbidity	0.531	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P423520

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2374640	Calcium	2.26	Spike	P	0 - 20
2374640	Iron	2.76	Spike	P	0 - 20
2374640	Magnesium	2.69	Spike	P	0 - 20
2374640	Potassium	3.16	Spike	P	0 - 20
2374640	Sodium	2.06	Spike	P	0 - 20
2374640	Strontium	2.14	Spike	P	0 - 20
2374640	Tin	4.41	Spike	P	0 - 20
2374640	Titanium	4.02	Spike	P	0 - 20
2374640	Vanadium	4.41	Spike	P	0 - 20
2374640	Zinc	4.33	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P423520

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2374640	Aluminum	0.439	Spike	P	0 - 20
2374640	Antimony	1.07	Spike	P	0 - 20
2374640	Arsenic	0.756	Spike	P	0 - 20
2374640	Barium	1.81	Spike	P	0 - 20
2374640	Beryllium	0.461	Spike	P	0 - 20
2374640	Boron	0.148	Spike	P	0 - 20
2374640	Cadmium	0.681	Spike	P	0 - 20
2374640	Chromium	1.66	Spike	P	0 - 20
2374640	Cobalt	0.785	Spike	P	0 - 20
2374640	Copper	0.104	Spike	P	0 - 20
2374640	Lead	0.973	Spike	P	0 - 20
2374640	Manganese	0.307	Spike	P	0 - 20
2374640	Molybdenum	1.44	Spike	P	0 - 20
2374640	Nickel	0.589	Spike	P	0 - 20
2374640	Selenium	0.725	Spike	P	0 - 20
2374640	Silver	2.57	Spike	P	0 - 20
2374640	Thallium	2.41	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P423714

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2374882	Chloride	3.46	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P423717

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2374882	Sulfate	4.46	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424100

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2374775	Ammonia-N	0.141	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423750

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2375236	Kjeldahl Nitrogen	0.808	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P423590

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2374946	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P423567

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2374883	Total-P	0.275	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P423550

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2374872	O-Phosphate-P	1.63	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P423367

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2374117	Acesulfame K	11.8	Spike	P	0 - 30
2374117	AMPA	0.815	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P423367

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2374117	Endothall	0.813	Spike	P	0 - 30
2374117	Glufosinate	0.0448	Spike	P	0 - 30
2374117	Glyphosate	5.56	Spike	P	0 - 30
2374117	Sucralose	18.4	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P423422

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2374876	2,4-D	1.19	Spike	P	0 - 30
2374876	2,4,5-T	2.56	Spike	P	0 - 30
2374876	Acetaminophen	3.18	Spike	P	0 - 30
2374876	Acetamiprid	2.25	Spike	P	0 - 30
2374876	Afidopyropen	2.76	Spike	P	0 - 30
2374876	Bentazon	6.09	Spike	P	0 - 30
2374876	Benzovindiflupyr	1.41	Spike	P	0 - 30
2374876	Carbamazepine	1.56	Spike	P	0 - 30
2374876	Clothianidin	0.0828	Spike	P	0 - 30
2374876	Dinotefuran	0.464	Spike	P	0 - 30
2374876	Diuron	2.62	Spike	P	0 - 30
2374876	Fenuron	2.23	Spike	P	0 - 30
2374876	Fluridone	0.911	Spike	P	0 - 30
2374876	Hydrocodone	2.02	Spike	P	0 - 30
2374876	Ibuprofen	2.57	Spike	P	0 - 30
2374876	Imazapyr	4.20	Spike	P	0 - 30
2374876	Imidacloprid	6.24	Spike	P	0 - 30
2374876	Linuron	4.90	Spike	P	0 - 30
2374876	Mandestrobin	4.93	Spike	P	0 - 30
2374876	MCPP	2.28	Spike	P	0 - 30
2374876	Naproxen	12.8	Spike	P	0 - 30
2374876	Primidone	2.92	Spike	P	0 - 30
2374876	Pyraclostrobin	19.1	Spike	P	0 - 30
2374876	Silvex	5.31	Spike	P	0 - 30
2374876	Thiamethoxam	0.476	Spike	P	0 - 30
2374876	Tolfenpyrad	23.9	Spike	P	0 - 30
2374876	Triclopyr	3.96	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P423927

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2374629	Total Alkalinity	1.30	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015
Batch ID: P423893

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2374869	TDS	5.86	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500-F- C-2011
Batch ID: P423931

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2374629	Fluoride	0.472	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P423708

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2374775	Organic Carbon	0.176	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2374876

Field Sample ID: G2WA0009

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	80.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	99.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	91.8	P	30 - 160
EPA 8321B	Diuron-d6	98.2	P	30 - 160
EPA 8321B	Endothall-d6	97.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	81.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	90.6	P	30 - 160
EPA 8321B	Primidone-d5	95.8	P	30 - 160
EPA 8321B	Sucralose-d6	88.7	P	30 - 160

Lab Sample ID: 2374877

Field Sample ID: G2WA0008

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	89.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	99.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	97.2	P	30 - 160
EPA 8321B	Diuron-d6	95.2	P	30 - 160
EPA 8321B	Endothall-d6	95.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	87.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	80.9	P	30 - 160
EPA 8321B	Primidone-d5	108	P	30 - 160
EPA 8321B	Sucralose-d6	87.9	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A116398

Included Lab Sample IDs: 2374868, 2374869

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

Reference Method: EPA 8321B

Run ID: A116420

Included Lab Sample IDs: 2374876, 2374877

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	107	105	P/P	60 - 160
Sucralose	78.5	72.6	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A116422

Included Lab Sample IDs: 2374876, 2374877

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	102	95.6	P/P	60 - 160
Endothall	99.9	103	P/P	60 - 160
Glufosinate	94.1	95.6	P/P	60 - 160
Glyphosate	107	104	P/P	60 - 160

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A116438

Included Lab Sample IDs: 2374868, 2374869

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

Reference Method: DEP SOP: NU-094-1

Run ID: A116439

Included Lab Sample IDs: 2374868, 2374869

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A116443

Included Lab Sample IDs: 2374872, 2374873

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.8	92.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A116461

Included Lab Sample IDs: 2374870, 2374871

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	96.0	94.5	P/P	90 - 110

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8321B

Run ID: A116473

Included Lab Sample IDs: 2374876, 2374877

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	106	90.7	P/P	50 - 150
2,4-D	91.2	97.7	P/P	50 - 150
2,4,5-T	104	111	P/P	50 - 150
2,4,5-T	109	113	P/P	50 - 150
Acetaminophen	105	108	P/P	60 - 160
Acetaminophen	107	107	P/P	60 - 160
Acetamiprid	108	109	P/P	50 - 150
Acetamiprid	108	108	P/P	50 - 150
Afidopyropen	90.5	108	P/P	50 - 150
Afidopyropen	99.9	109	P/P	50 - 150
Bentazon	103	111	P/P	50 - 160
Bentazon	111	94.5	P/P	50 - 160
Benzovindiflupyr	109	112	P/P	50 - 150
Benzovindiflupyr	110	110	P/P	50 - 150
Carbamazepine	108	111	P/P	60 - 150
Carbamazepine	110	109	P/P	60 - 150
Clothianidin	106	107	P/P	60 - 150
Clothianidin	111	110	P/P	60 - 150
Dinotefuran	105	103	P/P	50 - 150
Dinotefuran	109	105	P/P	50 - 150
Diuron	120	118	P/P	60 - 160
Diuron	121	118	P/P	60 - 160
Fenuron	104	109	P/P	60 - 150
Fenuron	106	100	P/P	60 - 150
Fluridone	111	114	P/P	60 - 160
Fluridone	111	113	P/P	60 - 160
Hydrocodone	102	104	P/P	60 - 150
Hydrocodone	103	103	P/P	60 - 150
Ibuprofen	78.7	108	P/P	50 - 160
Ibuprofen	87.3	86.9	P/P	50 - 160
Imazapyr	93.5	91.3	P/P	50 - 150
Imazapyr	94.4	109	P/P	50 - 150
Imidacloprid	101	104	P/P	60 - 150
Imidacloprid	103	101	P/P	60 - 150
Linuron	113	108	P/P	60 - 150
Linuron	119	92.4	P/P	60 - 150
Mandestrobin	106	106	P/P	50 - 150
Mandestrobin	108	103	P/P	50 - 150
MCPP	97.3	106	P/P	50 - 150
MCPP	99.7	104	P/P	50 - 150
Naproxen	140	105	P/P	50 - 160
Naproxen	66.4	88.8	P/P	50 - 160
Primidone	101	99.9	P/P	60 - 150
Primidone	111	98.4	P/P	60 - 150
Pyraclostrobin	109	109	P/P	60 - 150
Pyraclostrobin	109	104	P/P	60 - 150
Silvex	100	99.8	P/P	50 - 150
Silvex	99.8	99.2	P/P	50 - 150
Thiamethoxam	102	104	P/P	50 - 150
Thiamethoxam	104	98.7	P/P	50 - 150
Tolfenpyrad	104	105	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A116473

Included Lab Sample IDs: 2374876, 2374877

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Tolfenpyrad	106	109	P/P	60 - 150
Triclopyr	112	112	P/P	50 - 150
Triclopyr	115	119	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A116508

Included Lab Sample IDs: 2374870, 2374871

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

Reference Method: SM 5310 B-2011

Run ID: A116546

Included Lab Sample IDs: 2374870, 2374871

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.0	99.9	P/P	90 - 110
Organic Carbon	100	99.4	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A116556

Included Lab Sample IDs: 2374878, 2374879

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	99.7	100	P/P	90 - 110
Iron	101	102	P/P	90 - 110
Magnesium	98.3	99.3	P/P	90 - 110
Potassium	97.9	99.2	P/P	90 - 110
Sodium	100	101	P/P	90 - 110
Strontium	97.9	100	P/P	90 - 110
Tin	97.0	95.3	P/P	90 - 110
Titanium	97.9	96.7	P/P	90 - 110
Vanadium	97.7	95.2	P/P	90 - 110
Zinc	97.3	97.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A116596

Included Lab Sample IDs: 2374870, 2374871

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.6	102	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A116645

Included Lab Sample IDs: 2374868, 2374869

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	94.6	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500-F- C-2011

Run ID: A116645

Included Lab Sample IDs: 2374868, 2374869

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A116722

Included Lab Sample IDs: 2374870, 2374871

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.7	98.9	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A116837

Included Lab Sample IDs: 2374878, 2374879

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	104	104	P/P	90 - 110
Barium	103	102	P/P	90 - 110
Beryllium	102	101	P/P	90 - 110
Boron	103	104	P/P	90 - 110
Cadmium	106	106	P/P	90 - 110
Chromium	103	102	P/P	90 - 110
Cobalt	99.9	99.1	P/P	90 - 110
Copper	104	104	P/P	90 - 110
Lead	94.8	95.3	P/P	90 - 110
Manganese	104	103	P/P	90 - 110
Molybdenum	103	103	P/P	90 - 110
Nickel	103	103	P/P	90 - 110
Silver	101	100	P/P	90 - 110
Thallium	102	103	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A116858

Included Lab Sample IDs: 2374878, 2374879

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	101	100	P/P	90 - 110
Antimony	97.8	101	P/P	90 - 110
Arsenic	102	103	P/P	90 - 110
Arsenic	103	102	P/P	90 - 110
Selenium	102	103	P/P	90 - 110
Selenium	103	103	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)	101				2.36	
EPA 180.1 Rev. 2.0	Turbidity	102				0.531	
EPA 200.7 Rev. 4.4	Calcium	101	107	94.6			2.26
	Iron	102	104	101	102		2.76
	Magnesium	98.2	99.9	96.0	97.4		2.69
	Potassium	94.7	101	97.0	98.9		3.16
	Sodium	99.6	103	100	102		2.06
	Strontium	97.3	99.9	97.7	99.4		2.14
	Tin	95.7	96.0	91.9	97.3		4.41
	Titanium	99.5	102	98.4	102		4.02
	Vanadium	98.4	99.9	95.5	102		4.41
	Zinc	98.6	98.6	94.4	100		4.33
EPA 200.8 Rev. 5.4	Aluminum	105	104	105	102		0.439
	Antimony	104	103	104	106		1.07
	Arsenic	105	103	104	106		0.756
	Barium	104	105	108	105		1.81
	Beryllium	96.0	97.2	97.6	96.6		0.461
	Boron	106	105	105	103		0.148
	Cadmium	103	109	110	110		0.681
	Chromium	99.8	105	107	101		1.66
	Cobalt	102	103	103	102		0.785
	Copper	105	104	96.5	96.4		0.104
	Lead	94.0	95.9	96.8	96.8		0.973
	Manganese	102	107	107	105		0.307
	Molybdenum	101	106	108	108		1.44
	Nickel	106	106	106	105		0.589
	Selenium	104	103	102	106		0.725
	Silver	102	103	105	105		2.57
	Thallium	102	105	107	105		2.41
EPA 300.0 Rev. 2.1	Chloride	100	95.2	98.7		3.46	
	Sulfate	101	96.6	95.1		4.46	
EPA 350.1 Rev. 2.0	Ammonia-N	98.0	99.8	100			0.141
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	105	103			0.808
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5	100	100			0.0
EPA 365.1 Rev. 2.0	Total-P	104	104	104			0.275
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100	97.7	99.4			1.63
EPA 8321B	2,4-D	77.3	82.5	83.5			1.19
	2,4,5-T	78.5	82.2	84.3			2.56
	Acesulfame K	97.0	65.5	58.1			11.8
	Acetaminophen	103	98.7	102			3.18
	Acetamiprid	81.2	87.4	85.4			2.25
	Afidopyropen	60.1	70.9	72.9			2.76
	AMPA	90.7	78.4	77.8			0.815
	Bentazon	102	88.8	96.2			6.09
	Benzovindiflupyr	92.9	85.5	84.3			1.41
	Carbamazepine	95.3	89.1	90.5			1.56
	Clothianidin	106	98.6	98.7			0.0828
	Dinotefuran	105	97.8	97.3			0.464
	Diuron	92.2	78.1	80.2			2.62
	Endothall	101	107	106			0.813
	Fenuron	112	102	99.8			2.23
	Fluridone	99.2	91.0	90.2			0.911
	Glufosinate	96.9	97.2	97.3			0.0448
	Glyphosate	96.7	97.3	103			5.56

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Hydrocodone	105	93.5	95.4		2.02
	Ibuprofen	66.5	68.8	67.1		2.57
	Imazapyr	89.6	91.3	87.5		4.20
	Imidacloprid	114	116	109		6.24
	Linuron	84.8	78.3	82.3		4.90
	Mandestrobin	94.8	88.4	84.1		4.93
	MCCP	90.0	95.7	93.6		2.28
	Naproxen	63.5	84.8	96.4		12.8
	Primidone	103	92.1	89.5		2.92
	Pyraclostrobin	89.5	63.3	76.6		19.1
	Silvex	78.9	80.0	84.4		5.31
	Sucralose	94.9	83.2	101		18.4
	Thiamethoxam	101	96.9	96.4		0.476
	Tolfenpyrad	42.6	37.6	47.7		23.9
	Triclopyr	90.0	91.5	88.0		3.96
SM 2320 B-2011	Total Alkalinity	97.6			1.30	
SM 2540 C-2015	TDS	92.2			5.86	
SM 2540 D-2015	TSS	101				
	TSS	95.2				
SM 4500-F- C-2011	Fluoride	101	98.1	97.5		0.472
SM 5310 B-2011	Organic Carbon	95.4	99.2	99.4		0.176

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2374868, 2374869
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2374868, 2374869
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2374878, 2374879
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2374878, 2374879
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2374868, 2374869
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2374868, 2374869
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2374870, 2374871
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2374870, 2374871
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2374870, 2374871
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2374870, 2374871
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2374872, 2374873
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2374876, 2374877
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2374868, 2374869
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2374878, 2374879
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2374868, 2374869
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2374868, 2374869
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2374868, 2374869
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2374870, 2374871

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	12/13/2022			12/14/2022 14:36	Alexis Price	2374868
	12/13/2022			12/14/2022 14:37	Alexis Price	2374869
EPA 180.1 Rev. 2.0	12/13/2022			12/14/2022 13:18	Chandler E Cox	2374868
	12/13/2022			12/14/2022 13:20	Chandler E Cox	2374869
EPA 200.7 Rev. 4.4	12/13/2022	12/14/2022 11:50	George D Taylor	12/19/2022 21:18	Betina Topolski	2374878
	12/13/2022	12/14/2022 11:50	George D Taylor	12/19/2022 21:39	Betina Topolski	2374879
EPA 200.8 Rev. 5.4	12/13/2022	12/14/2022 11:50	George D Taylor	01/11/2023 00:18	Emily M Philpot	2374879
	12/13/2022	12/14/2022 11:50	George D Taylor	01/11/2023 01:06	Emily M Philpot	2374878
	12/13/2022	12/14/2022 11:50	George D Taylor	01/11/2023 18:13	Emily M Philpot	2374879
	12/13/2022	12/14/2022 11:50	George D Taylor	01/11/2023 19:35	Emily M Philpot	2374878
	12/13/2022	12/14/2022 11:50	George D Taylor	12/17/2022 07:01	Anna M. Plaviak	2374868
EPA 300.0 Rev. 2.1	12/13/2022			12/17/2022 07:16	Anna M. Plaviak	2374869
	12/13/2022			01/04/2023 12:08	Ping Hua	2374870
EPA 350.1 Rev. 2.0	12/13/2022			01/04/2023 12:16	Ping Hua	2374871
	12/13/2022	12/20/2022 13:35	Simonne.V. Calhoun	12/21/2022 11:18	Samantha L Bates	2374870
EPA 351.2 Rev. 2.0	12/13/2022	12/20/2022 13:35	Simonne.V. Calhoun	12/21/2022 11:19	Samantha L Bates	2374871
	12/13/2022			12/15/2022 10:41	Beverly Y. Sanders	2374870
EPA 353.2 Rev. 2.0	12/13/2022			12/15/2022 10:42	Beverly Y. Sanders	2374871
	12/13/2022	12/15/2022 15:15	Simonne.V. Calhoun	12/16/2022 12:56	James L Waggeberby	2374870
EPA 365.1 Rev. 2.0	12/13/2022	12/15/2022 15:15	Simonne.V. Calhoun	12/16/2022 12:57	James L Waggeberby	2374871
EPA 365.1 Rev. 2.0 dissolved	12/13/2022			12/14/2022 15:11	Elise M. Gillis	2374872
	12/13/2022			12/14/2022 15:13	Elise M. Gillis	2374873
EPA 8321B	12/13/2022	12/13/2022 16:30	Manjita Shrestha	12/13/2022 18:01	Manjita Shrestha	2374876
	12/13/2022	12/13/2022 16:30	Manjita Shrestha	12/13/2022 18:16	Manjita Shrestha	2374877
	12/13/2022	12/13/2022 16:30	Manjita Shrestha	12/14/2022 01:56	Manjita Shrestha	2374876
	12/13/2022	12/13/2022 16:30	Manjita Shrestha	12/14/2022 02:09	Manjita Shrestha	2374877
	12/13/2022	12/14/2022 09:30	June Rhew	12/15/2022 04:47	Juyoung Kim	2374876
	12/13/2022	12/14/2022 09:30	June Rhew	12/15/2022 10:41	Juyoung Kim	2374877
	12/13/2022			12/22/2022 10:56	Dale L. Simmons	2374868
SM 2320 B-2011	12/13/2022			12/22/2022 11:11	Dale L. Simmons	2374869
	12/13/2022			12/19/2022 21:18	Betina Topolski	2374878
SM 2340 B-2011	12/13/2022			12/19/2022 21:39	Betina Topolski	2374879
	12/13/2022			12/15/2022 16:01	Yijie Li	2374868, 2374869
SM 2540 C-2015	12/13/2022			12/15/2022 16:01	Yijie Li	2374868, 2374869
SM 4500-F- C-2011	12/13/2022			12/22/2022 10:56	Dale L. Simmons	2374868
	12/13/2022			12/22/2022 11:11	Dale L. Simmons	2374869
SM 5310 B-2011	12/13/2022			12/16/2022 19:33	Elise M. Gillis	2374871
	12/13/2022			12/17/2022 00:24	Elise M. Gillis	2374870