

Chemical Analysis Report

SW-DIST-2023-08-03-01

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

Event Description: **SMP:: Run 13**
Request ID: **RQ-2023-07-31-14**
Customer: **SW-DIST**
Project ID: **SMP**

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13051 N. Telecom Parkway
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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 21-AUG-2023 15:20



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: 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: McDonald Branch at Thompson Rd

Collection Date/Time: 08/02/2023 09:20

Field ID: G2SW0093

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2428666	EPA 8321B	2,4-D	0.0020	U	ug/L	P433544	
		Acesulfame K	0.10	U	ug/L	P433416	
		2,4,5-T	0.0040	U	ug/L	P433544	
		AMPA	0.10	U	ug/L	P433416	
		Acetaminophen	0.0080	U	ug/L	P433544	
		Acetamiprid	0.0020	U	ug/L	P433544	
		Endothall	0.25	U	ug/L	P433416	
		Glufosinate	0.10	U	ug/L	P433416	
		Glyphosate	0.10	U	ug/L	P433416	
		Afidopyropen	0.0020	UJ	ug/L	P433544	CCV, RPD
		Bentazon	8.0E-04	U	ug/L	P433544	
		Sucralose	0.23		ug/L	P433416	
		Benzovindiflupyr	0.0020	U	ug/L	P433544	
		Carbamazepine	8.0E-04	U	ug/L	P433544	MS
		Clothianidin	0.0020	U	ug/L	P433544	
		Dinotefuran	0.0020	U	ug/L	P433544	
		Diuron	0.0020	U	ug/L	P433544	MS
		Fenuron	0.032	U	ug/L	P433544	
		Fluridone	0.0034		ug/L	P433544	
		Imazapyr	0.0040	U	ug/L	P433544	
		Hydrocodone	0.0020	U	ug/L	P433544	
		Ibuprofen	0.080	U	ug/L	P433544	
		Imidacloprid	0.0020	U	ug/L	P433544	
		Linuron	0.0040	UJ	ug/L	P433544	CCV
		Mandestrobin	0.0020	U	ug/L	P433544	
		MCPP	0.0020	U	ug/L	P433544	
		Naproxen	0.0080	U	ug/L	P433544	
		Primidone	0.0040	U	ug/L	P433544	
		Pyraclostrobin	0.0020	U	ug/L	P433544	
		Silvex	0.0040	U	ug/L	P433544	
		Thiamethoxam	0.0020	U	ug/L	P433544	
		Tolfenpyrad	0.0020	U	ug/L	P433544	
		Triclopyr	0.0040	U	ug/L	P433544	

Ref. Method and Comment:

EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Alafia River S Prong West Branch at Keysville Rd **Collection Date/Time: 08/02/2023 09:40**

Field ID: G2SW0160

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2428646	DEP SOP: NU-094-1	Color (true)	70	A	PCU	P433402	
	EPA 180.1 Rev. 2.0	Turbidity	4.0		NTU	P433412	
	EPA 300.0 Rev. 2.1	Chloride	24		mg Cl/L	P433649	
		Sulfate	35		mg SO4/L	P433652	
	SM 2320 B-2011	Total Alkalinity	31		mg CaCO3/L	P433569	
	SM 2540 C-2015	TDS	159		mg/L	P433808	
	SM 2540 D-2015	TSS	6	I	mg/L	P433689	
	SM 4500-F- C-2011	Fluoride	0.40		mg F/L	P433571	
2428648	EPA 350.1 Rev. 2.0	Ammonia-N	0.082		mg N/L	P433561	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.81		mg N/L	P433433	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.4		mg N/L	P433454	
	EPA 365.1 Rev. 2.0	Total-P	0.53		mg P/L	P433496	
	SM 5310 B-2011	Organic Carbon	9.9		mg C/L	P433531	

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: Moccassin Creek at CR 39

Collection Date/Time: 08/02/2023 10:05

Field ID: G2SW0161

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2428647	DEP SOP: NU-094-1	Color (true)	67		PCU	P433402	
	EPA 180.1 Rev. 2.0	Turbidity	9.7		NTU	P433412	
	EPA 300.0 Rev. 2.1	Chloride	31		mg Cl/L	P433649	
		Sulfate	49		mg SO4/L	P433652	
	SM 2320 B-2011	Total Alkalinity	34		mg CaCO3/L	P433569	
	SM 2540 C-2015	TDS	194		mg/L	P433808	
	SM 2540 D-2015	TSS	12		mg/L	P433689	
	SM 4500-F- C-2011	Fluoride	0.18		mg F/L	P433571	
2428649	EPA 350.1 Rev. 2.0	Ammonia-N	0.078		mg N/L	P433561	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P433433	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.4		mg N/L	P433454	
	EPA 365.1 Rev. 2.0	Total-P	0.19		mg P/L	P433496	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P433531	

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: Chito Branch at CR39

Collection Date/Time: 08/02/2023 10:15

Field ID: G2SW0135

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2428642	DEP SOP: NU-094-1	Color (true)	310		PCU	P433401	
	EPA 180.1 Rev. 2.0	Turbidity	8.7		NTU	P433412	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P433480	
		Sulfate	8.9		mg SO4/L	P433482	
	SM 2320 B-2011	Total Alkalinity	63		mg CaCO3/L	P433569	
	SM 2540 C-2015	TDS	160		mg/L	P433808	
	SM 2540 D-2015	TSS	7	I	mg/L	P433689	
2428644	SM 4500-F- C-2011	Fluoride	0.38		mg F/L	P433571	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.58		mg N/L	P433561	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.1		mg N/L	P433433	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P433454	
	EPA 365.1 Rev. 2.0	Total-P	0.87		mg P/L	P433718	
2428663	SM 5310 B-2011	Organic Carbon	27		mg C/L	P433531	
	EPA 8321B	2,4-D	0.018		ug/L	P433321	
		Acesulfame K	0.10	U	ug/L	P433416	
		2,4,5-T	0.0040	U	ug/L	P433321	
		AMPA	0.67		ug/L	P433416	
		Acetaminophen	0.0094	I	ug/L	P433321	
		Acetamiprid	0.0020	U	ug/L	P433321	
		Endothall	0.25	U	ug/L	P433416	
		Glufosinate	0.10	U	ug/L	P433416	
		Glyphosate	5.0		ug/L	P433416	
		Afidopyropen	0.0020	U	ug/L	P433321	
		Sucralose	0.031	I	ug/L	P433416	
		Bentazon	8.0E-04	U	ug/L	P433321	MS
		Benzovindiflupyr	0.0020	U	ug/L	P433321	
		Carbamazepine	8.0E-04	U	ug/L	P433321	
		Clothianidin	0.0020	U	ug/L	P433321	
		Dinotefuran	0.0020	U	ug/L	P433321	
		Diuron	0.0020	U	ug/L	P433321	MS, RPD
		Fenuron	0.032	U	ug/L	P433321	
		Fluridone	8.0E-04	U	ug/L	P433321	
		Imazapyr	0.018		ug/L	P433321	
		Hydrocodone	0.0020	U	ug/L	P433321	
		Ibuprofen	0.080	U	ug/L	P433321	
		Imidacloprid	0.0020	U	ug/L	P433321	
		Linuron	0.0040	U	ug/L	P433321	
		Mandestrobin	0.0020	U	ug/L	P433321	
		MCPP	0.0020	U	ug/L	P433321	
		Naproxen	0.0080	U	ug/L	P433321	
		Primidone	0.0040	U	ug/L	P433321	
		Pyraclostrobin	0.0020	U	ug/L	P433321	
		Silvex	0.0040	U	ug/L	P433321	
		Thiamethoxam	0.0020	U	ug/L	P433321	

Field ID: G2SW0135

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2428663	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P433321	
		Triclopyr	0.0040	U	ug/L	P433321	

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: Fishhawk Creek at HA Site

Collection Date/Time: 08/02/2023 10:35

Field ID: G2SW0144

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2428665	EPA 8321B	2,4-D	0.61		ug/L	P433544	
		Acesulfame K	0.10	U	ug/L	P433416	
		2,4,5-T	0.0040	U	ug/L	P433544	
		AMPA	1.8		ug/L	P433416	
		Acetaminophen	0.0080	U	ug/L	P433544	
		Acetamiprid	0.0020	U	ug/L	P433544	
		Endothall	0.25	U	ug/L	P433416	
		Glufosinate	0.10	U	ug/L	P433416	
		Glyphosate	1.2		ug/L	P433416	
		Afidopyropen	0.0020	UJ	ug/L	P433544	CCV, RPD
		Bentazon	0.0040		ug/L	P433544	
		Sucralose	0.15		ug/L	P433416	
		Benzovindiflupyr	0.0020	U	ug/L	P433544	
		Carbamazepine	8.0E-04	UJ	ug/L	P433544	MS
		Clothianidin	0.093		ug/L	P433544	
		Dinotefuran	0.0020	U	ug/L	P433544	
		Diuron	0.0020	UJ	ug/L	P433544	MS
		Fenuron	0.032	U	ug/L	P433544	
		Fluridone	8.0E-04	U	ug/L	P433544	
		Imazapyr	0.040		ug/L	P433544	
		Hydrocodone	0.0020	U	ug/L	P433544	
		Ibuprofen	0.080	U	ug/L	P433544	
		Imidacloprid	0.11		ug/L	P433544	
		Linuron	0.0040	UJ	ug/L	P433544	CCV
		Mandestrobin	0.0020	U	ug/L	P433544	
		MCPP	0.0020	U	ug/L	P433544	
		Naproxen	0.0080	U	ug/L	P433544	
		Primidone	0.0040	U	ug/L	P433544	
		Pyraclostrobin	0.0020	U	ug/L	P433544	
		Silvex	0.0040	U	ug/L	P433544	
		Thiamethoxam	0.0020	U	ug/L	P433544	
		Tolfenpyrad	0.0020	U	ug/L	P433544	
		Triclopyr	0.0040	U	ug/L	P433544	

Ref. Method and Comment:

EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Field Blank

Collection Date/Time: 08/02/2023 10:20

Field ID: FB_08022023

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2428643	DEP SOP: NU-094-1	Color (true)	2.5	U	PCU	P433401	
	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P433412	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P433480	
		Sulfate	0.20	U	mg SO4/L	P433482	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P433569	
	SM 2540 C-2015	TDS	15	U	mg/L	P433808	
	SM 2540 D-2015	TSS	2	U	mg/L	P433689	
	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P433571	
2428645	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P433561	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P433433	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P433454	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P433496	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P433531	

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: P433401

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P433402

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433412

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433480

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433482

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433649

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433652

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P433561

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433433

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: P433454

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433496

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433718

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

Reference Method: EPA 8321B
Batch ID: P433321

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	0.080	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P433416

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P433416

Component	Result	Code	Units
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: P433544

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	0.080	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2320 B-2011

Batch ID: P433569

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

Reference Method: SM 2540 C-2015

Batch ID: P433808

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2015
Batch ID: P433689

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P433571

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P433531

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: P433401

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.6		P	90 - 110

Reference Method: DEP SOP: NU-094-1
Batch ID: P433402

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.9		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433412

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433480

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433482

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433649

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433652

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P433561

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433433

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P433454

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	106		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P433496

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P433718

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

Reference Method: EPA 8321B

Batch ID: P433321

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	83.3		P	40 - 150
2,4,5-T	80.8		P	40 - 150
Acetaminophen	87.3		P	30 - 150
Acetamiprid	93.4		P	40 - 150
Afidopyropen	78.9		P	30 - 150
Bentazon	137		P	30 - 150
Benzovindiflupyr	88.3		P	40 - 150
Carbamazepine	66.2		P	40 - 150
Clothianidin	95.4		P	40 - 150
Dinotefuran	114		P	40 - 150
Diuron	63.2		P	40 - 150
Fenuron	94.7		P	40 - 150
Fluridone	102		P	40 - 150
Hydrocodone	97.6		P	40 - 150
Ibuprofen	72.2		P	40 - 150
Imazapyr	77.6		P	40 - 150
Imidacloprid	86.8		P	40 - 150
Linuron	73.7		P	40 - 150
Mandestrobin	95.5		P	40 - 150
MCPP	90.8		P	40 - 150
Naproxen	76.1		P	40 - 150
Primidone	79.2		P	40 - 150
Pyraclostrobin	71.5		P	40 - 150
Silvex	89.4		P	40 - 150
Thiamethoxam	99.0		P	40 - 150
Tolfenpyrad	44.3		P	30 - 150
Triclopyr	82.4		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P433416

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	93.2		P	40 - 150
AMPA	74.6		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P433416

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Endothall	93.3		P	40 - 150
Glufosinate	86.6		P	40 - 150
Glyphosate	97.1		P	40 - 150
Sucralose	85.4		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P433544

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	78.8		P	40 - 150
2,4,5-T	81.6		P	40 - 150
Acetaminophen	71.6		P	30 - 150
Acetamiprid	85.6		P	40 - 150
Afidopyropen	88.6		P	30 - 150
Bentazon	118		P	30 - 150
Benzovindiflupyr	61.0		P	40 - 150
Carbamazepine	67.9		P	40 - 150
Clothianidin	87.2		P	40 - 150
Dinotefuran	109		P	40 - 150
Diuron	61.8		P	40 - 150
Fenuron	95.7		P	40 - 150
Fluridone	97.4		P	40 - 150
Hydrocodone	111		P	40 - 150
Ibuprofen	69.4		P	40 - 150
Imazapyr	100		P	40 - 150
Imidacloprid	84.0		P	40 - 150
Linuron	71.9		P	40 - 150
Mandestrobin	94.6		P	40 - 150
MCPP	90.3		P	40 - 150
Naproxen	66.6		P	40 - 150
Primidone	85.4		P	40 - 150
Pyraclostrobin	75.8		P	40 - 150
Silvex	93.2		P	40 - 150
Thiamethoxam	82.7		P	40 - 150
Tolfenpyrad	74.0		P	30 - 150
Triclopyr	85.0		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P433569

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.1		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P433808

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	96.8		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2540 D-2015
Batch ID: P433689

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	89.7		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P433571

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.2		P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P433531

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433480

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2428113	Chloride	98.9		P	90 - 110
2428377	Chloride	99.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433482

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2428113	Sulfate	99.7		P	90 - 110
2428377	Sulfate	98.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433649

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2428690	Chloride	98.5		P	90 - 110
2428797	Chloride	95.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433652

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2428690	Sulfate	98.1		P	90 - 110
2428797	Sulfate	97.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P433561

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2428465	Ammonia-N	97.4	98.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433433

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427984	Kjeldahl Nitrogen	104	97.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P433454

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2428644	NO2NO3-N	101	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433496

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2428692	Total-P	103	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433718

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P433718

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429368	Total-P	103	104	P/P	90 - 110

Reference Method: EPA 8321B

Batch ID: P433321

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427704	2,4-D	88.2	95.9	P/P	40 - 150
2427704	2,4,5-T	90.9	102	P/P	40 - 150
2427704	Acetaminophen	104	98.3	P/P	30 - 150
2427704	Acetamiprid	71.7	70.5	P/P	40 - 150
2427704	Afidopyropen	75.4	75.7	P/P	30 - 150
2427704	Bentazon	159	153	F/F	30 - 150
2427704	Benzovindiflupyr	77.9	77.7	P/P	40 - 150
2427704	Carbamazepine	56.9	54.2	P/P	40 - 150
2427704	Clothianidin	115	102	P/P	40 - 150
2427704	Dinotefuran	104	86.7	P/P	40 - 150
2427704	Diuron	26.8	47.0	F/P	40 - 150
2427704	Fenuron	75.5	70.4	P/P	40 - 150
2427704	Fluridone	91.6	86.4	P/P	40 - 150
2427704	Hydrocodone	77.7	74.9	P/P	40 - 150
2427704	Ibuprofen	76.1	77.3	P/P	40 - 150
2427704	Imazapyr	83.6	85.1	P/P	40 - 150
2427704	Imidacloprid	124	120	P/P	40 - 150
2427704	Linuron	55.4	58.9	P/P	40 - 150
2427704	Mandestrobin	85.1	86.8	P/P	40 - 150
2427704	MCPP	97.6	103	P/P	40 - 150
2427704	Naproxen	62.7	70.6	P/P	40 - 150
2427704	Primidone	88.6	87.4	P/P	40 - 150
2427704	Pyraclostrobin	75.0	78.3	P/P	40 - 150
2427704	Silvex	108	101	P/P	40 - 150
2427704	Thiamethoxam	104	96.6	P/P	40 - 150
2427704	Tolfenpyrad	51.0	54.3	P/P	30 - 150
2427704	Triclopyr	91.4	94.2	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P433416

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2428009	Acesulfame K	113	121	P/P	40 - 150
2428009	AMPA	64.2	62.1	P/P	40 - 150
2428009	Endothall	102	97.4	P/P	40 - 150
2428009	Glufosinate	92.7	78.5	P/P	40 - 150
2428009	Glyphosate	90.6	96.6	P/P	40 - 150
2428009	Sucralose	84.5	87.1	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P433544

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2428665	2,4,5-T	99.8	114	P/P	40 - 150
2428665	Acetaminophen	79.6	84.5	P/P	30 - 150
2428665	Acetamiprid	40.5	44.6	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P433544

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2428665	Afidopyropen	51.9	92.8	P/P	30 - 150
2428665	Bentazon	66.0	81.7	P/P	30 - 150
2428665	Benzovindiflupyr	52.1	66.6	P/P	40 - 150
2428665	Carbamazepine	36.7	40.3	F/P	40 - 150
2428665	Dinotefuran	80.2	77.0	P/P	40 - 150
2428665	Diuron	36.9	38.7	F/F	40 - 150
2428665	Fenuron	49.5	50.3	P/P	40 - 150
2428665	Fluridone	56.7	72.9	P/P	40 - 150
2428665	Hydrocodone	56.9	57.8	P/P	40 - 150
2428665	Ibuprofen	69.4	68.2	P/P	40 - 150
2428665	Imazapyr	74.9	90.9	P/P	40 - 150
2428665	Linuron	62.6	54.5	P/P	40 - 150
2428665	Mandestrobin	68.8	83.0	P/P	40 - 150
2428665	MCP	111	107	P/P	40 - 150
2428665	Naproxen	66.8	65.2	P/P	40 - 150
2428665	Primidone	72.2	74.4	P/P	40 - 150
2428665	Pyraclostrobin	55.4	67.9	P/P	40 - 150
2428665	Silvex	102	101	P/P	40 - 150
2428665	Thiamethoxam	60.6	73.9	P/P	40 - 150
2428665	Tolfenpyrad	60.6	72.2	P/P	30 - 150
2428665	Triclopyr	111	107	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P433571

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2428410	Fluoride	99.1	101	P/P	94 - 106

Reference Method: SM 5310 B-2011

Batch ID: P433531

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2428378	Organic Carbon	96.6	96.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P433401

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2428392	Color (true)	0.140	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P433402

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2428646	Color (true)	1.14	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433412

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2428313	Turbidity	10.1	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433480

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2428113	Chloride	0.116	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433482

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2428113	Sulfate	0.338	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433649

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2428690	Chloride	0.241	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433652

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2428690	Sulfate	0.238	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P433561

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2428465	Ammonia-N	0.701	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433433

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427984	Kjeldahl Nitrogen	3.81	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P433454

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2428644	NO2NO3-N	0.627	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433496

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2428692	Total-P	0.633	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433718

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429368	Total-P	0.913	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P433321

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427704	2,4-D	8.37	Spike	P	0 - 30
2427704	2,4,5-T	11.7	Spike	P	0 - 30
2427704	Acetaminophen	5.21	Spike	P	0 - 30
2427704	Acetamiprid	1.59	Spike	P	0 - 30
2427704	Afidopyropen	0.494	Spike	P	0 - 30
2427704	Bentazon	3.94	Spike	P	0 - 30
2427704	Benzovindiflupyr	0.209	Spike	P	0 - 30
2427704	Carbamazepine	4.86	Spike	P	0 - 30
2427704	Clothianidin	12.0	Spike	P	0 - 30
2427704	Dinotefuran	17.7	Spike	P	0 - 30
2427704	Diuron	54.7	Spike	F	0 - 30
2427704	Fenuron	7.00	Spike	P	0 - 30
2427704	Fluridone	5.83	Spike	P	0 - 30
2427704	Hydrocodone	3.60	Spike	P	0 - 30
2427704	Ibuprofen	1.65	Spike	P	0 - 30
2427704	Imazapyr	1.53	Spike	P	0 - 30
2427704	Imidacloprid	3.22	Spike	P	0 - 30
2427704	Linuron	6.05	Spike	P	0 - 30
2427704	Mandestrobin	2.00	Spike	P	0 - 30
2427704	MCP	5.49	Spike	P	0 - 30
2427704	Naproxen	11.9	Spike	P	0 - 30
2427704	Primidone	1.33	Spike	P	0 - 30
2427704	Pyraclostrobin	4.30	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P433321

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427704	Silvex	6.40	Spike	P	0 - 30
2427704	Thiamethoxam	7.56	Spike	P	0 - 30
2427704	Tolfenpyrad	6.16	Spike	P	0 - 30
2427704	Triclopyr	3.01	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P433416

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2428009	Acesulfame K	6.32	Spike	P	0 - 30
2428009	AMPA	3.05	Spike	P	0 - 30
2428009	Endothall	4.58	Spike	P	0 - 30
2428009	Glufosinate	16.5	Spike	P	0 - 30
2428009	Glyphosate	5.25	Spike	P	0 - 30
2428009	Sucralose	3.04	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P433544

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2428665	2,4-D	9.70	Spike	P	0 - 30
2428665	2,4,5-T	12.9	Spike	P	0 - 30
2428665	Acetaminophen	5.99	Spike	P	0 - 30
2428665	Acetamiprid	9.79	Spike	P	0 - 30
2428665	Afidopyropen	56.6	Spike	F	0 - 30
2428665	Bentazon	12.7	Spike	P	0 - 30
2428665	Benzovindiflupyr	24.4	Spike	P	0 - 30
2428665	Carbamazepine	9.33	Spike	P	0 - 30
2428665	Clothianidin	2.54	Spike	P	0 - 30
2428665	Dinotefuran	4.05	Spike	P	0 - 30
2428665	Diuron	4.64	Spike	P	0 - 30
2428665	Fenuron	1.61	Spike	P	0 - 30
2428665	Fluridone	24.9	Spike	P	0 - 30
2428665	Hydrocodone	1.57	Spike	P	0 - 30
2428665	Ibuprofen	1.69	Spike	P	0 - 30
2428665	Imazapyr	12.1	Spike	P	0 - 30
2428665	Imidacloprid	14.0	Spike	P	0 - 30
2428665	Linuron	13.8	Spike	P	0 - 30
2428665	Mandestrobin	18.7	Spike	P	0 - 30
2428665	MCPP	4.26	Spike	P	0 - 30
2428665	Naproxen	2.50	Spike	P	0 - 30
2428665	Primidone	3.06	Spike	P	0 - 30
2428665	Pyraclostrobin	20.1	Spike	P	0 - 30
2428665	Silvex	0.709	Spike	P	0 - 30
2428665	Thiamethoxam	19.8	Spike	P	0 - 30
2428665	Tolfenpyrad	17.4	Spike	P	0 - 30
2428665	Triclopyr	3.93	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P433569

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2428410	Total Alkalinity	1.03	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P433808

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427726	TDS	7.36	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P433571

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2428410	Fluoride	0.959	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P433531

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2428378	Organic Carbon	0.448	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2428663

Field Sample ID: G2SW0135

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	89.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	78.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	32.6	P	30 - 160
EPA 8321B	Diuron-d6	42.7	P	30 - 160
EPA 8321B	Endothall-d6	110	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	111	P	30 - 160
EPA 8321B	Ibuprofen-d3	68.9	P	30 - 160
EPA 8321B	Primidone-d5	46.9	P	30 - 160
EPA 8321B	Sucralose-d6	99.3	P	30 - 160

Lab Sample ID: 2428665

Field Sample ID: G2SW0144

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	116	P	30 - 160
EPA 8321B	Acetaminophen-d4	85.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	49.3	P	30 - 160
EPA 8321B	Diuron-d6	34.0	P	30 - 160
EPA 8321B	Endothall-d6	98.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	109	P	30 - 160
EPA 8321B	Ibuprofen-d3	74.6	P	30 - 160
EPA 8321B	Primidone-d5	62.6	P	30 - 160
EPA 8321B	Sucralose-d6	90.7	P	30 - 160

Lab Sample ID: 2428666

Field Sample ID: G2SW0093

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	110	P	30 - 160
EPA 8321B	Acetaminophen-d4	87.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	48.8	P	30 - 160
EPA 8321B	Diuron-d6	42.6	P	30 - 160
EPA 8321B	Endothall-d6	98.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	120	P	30 - 160
EPA 8321B	Ibuprofen-d3	62.2	P	30 - 160
EPA 8321B	Primidone-d5	64.5	P	30 - 160
EPA 8321B	Sucralose-d6	90.5	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A120763

Included Lab Sample IDs: 2428642, 2428643

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

Reference Method: DEP SOP: NU-094-1

Run ID: A120824

Included Lab Sample IDs: 2428642, 2428643, 2428646, 2428647

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	96.9	97.9	P/P	90 - 110
Color (true)	99.3	96.9	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A120827

Included Lab Sample IDs: 2428642, 2428643, 2428646, 2428647

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	99.0	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A120849

Included Lab Sample IDs: 2428644, 2428645, 2428648, 2428649

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	104	105	P/P	90 - 110
NO2NO3-N	106	106	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A120876

Included Lab Sample IDs: 2428644, 2428645, 2428648, 2428649

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.6	92.8	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A120883

Included Lab Sample IDs: 2428644, 2428645, 2428648, 2428649

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.2	98.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A120886

Included Lab Sample IDs: 2428663, 2428665, 2428666

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	99.8	100	P/P	60 - 160
Sucralose	81.8	78.8	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A120887

Included Lab Sample IDs: 2428663, 2428665, 2428666

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	111	122	P/P	60 - 160
Endothall	98.2	101	P/P	60 - 160
Glufosinate	82.2	86.0	P/P	60 - 160
Glyphosate	99.4	100	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A120891

Included Lab Sample IDs: 2428644, 2428645, 2428648, 2428649

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	101	P/P	90 - 110
Ammonia-N	99.5	101	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A120893

Included Lab Sample IDs: 2428642, 2428643, 2428646, 2428647

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.1	94.0	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A120893

Included Lab Sample IDs: 2428642, 2428643, 2428646, 2428647

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A120894

Included Lab Sample IDs: 2428648, 2428649

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.6	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A120895

Included Lab Sample IDs: 2428646, 2428647

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.2	98.1	P/P	90 - 110
Sulfate	99.2	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A120918

Included Lab Sample IDs: 2428645

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.0	99.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A120922
Included Lab Sample IDs: 2428663

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	86.5	79.4	P/P	50 - 150
2,4,5-T	82.1	93.1	P/P	50 - 150
Acetaminophen	104	103	P/P	60 - 160
Acetamiprid	108	108	P/P	50 - 150
Afidopyropen	91.5	111	P/P	50 - 150
Bentazon	103	103	P/P	50 - 160
Benzovindiflupyr	115	107	P/P	50 - 150
Carbamazepine	104	109	P/P	60 - 150
Clothianidin	99.9	108	P/P	60 - 150
Dinotefuran	117	105	P/P	50 - 150
Diuron	109	107	P/P	60 - 160
Fenuron	105	104	P/P	60 - 150
Fluridone	127	116	P/P	60 - 160
Hydrocodone	114	106	P/P	60 - 150
Ibuprofen	90.0	91.4	P/P	50 - 160
Imazapyr	88.6	92.8	P/P	50 - 150
Imidacloprid	97.4	96.6	P/P	60 - 150
Linuron	98.0	89.6	P/P	60 - 150
Mandestrobin	113	109	P/P	50 - 150
MCPP	91.1	93.9	P/P	50 - 150
Naproxen	78.4	83.9	P/P	50 - 160
Primidone	103	103	P/P	60 - 150
Pyraclostrobin	108	112	P/P	60 - 150
Silvex	96.8	101	P/P	50 - 150
Thiamethoxam	115	102	P/P	50 - 150
Tolfenpyrad	98.5	105	P/P	60 - 150
Triclopyr	104	90.7	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A120993
Included Lab Sample IDs: 2428644

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.9	99.8	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A121038
Included Lab Sample IDs: 2428665, 2428666

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	97.2	93.2	P/P	50 - 150
2,4,5-T	100	87.5	P/P	50 - 150
Acetaminophen	90.4	94.9	P/P	60 - 160
Acetamiprid	110	111	P/P	50 - 150
Afidopyropen	81.3	153*	P/F	50 - 150
Bentazon	116	123	P/P	50 - 160
Benzovindiflupyr	121	108	P/P	50 - 150
Carbamazepine	94.4	113	P/P	60 - 150
Clothianidin	87.0	109	P/P	60 - 150
Dinotefuran	131	141	P/P	50 - 150
Diuron	75.0	93.6	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A121038

Included Lab Sample IDs: 2428665, 2428666

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fenuron	111	119	P/P	60 - 150
Fluridone	103	105	P/P	60 - 160
Hydrocodone	117	114	P/P	60 - 150
Ibuprofen	118	133	P/P	50 - 160
Imazapyr	98.3	97.1	P/P	50 - 150
Imidacloprid	97.3	91.5	P/P	60 - 150
Linuron	154*	154*	F/F	60 - 150
Mandestrobin	111	95.1	P/P	50 - 150
MCPP	98.3	85.3	P/P	50 - 150
Naproxen	74.9	112	P/P	50 - 160
Primidone	102	112	P/P	60 - 150
Pyraclostrobin	72.6	121	P/P	60 - 150
Silvex	105	103	P/P	50 - 150
Thiamethoxam	95.9	99.1	P/P	50 - 150
Tolfenpyrad	83.7	98.5	P/P	60 - 150
Triclopyr	84.3	87.5	P/P	50 - 150

* 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	MS
						SMP	
DEP SOP: NU-094-1	Color (true)	97.6				0.140	
	Color (true)	97.9				1.14	
EPA 180.1 Rev. 2.0	Turbidity	98.4				10.1	
EPA 300.0 Rev. 2.1	Chloride	99.9	98.9	99.2		0.116	
	Chloride	98.6	98.5	95.1		0.241	
	Sulfate	99.7	99.7	98.0		0.338	
	Sulfate	98.0	98.1	97.2		0.238	
EPA 350.1 Rev. 2.0	Ammonia-N	96.6	97.4	98.6			0.701
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.4	104	97.8			3.81
EPA 353.2 Rev. 2.0	NO2NO3-N	106	101	100			0.627
EPA 365.1 Rev. 2.0	Total-P	99.9	103	102			0.633
	Total-P	102	103	104			0.913
EPA 8321B	2,4-D	83.3	88.2	95.9			8.37
	2,4-D	78.8					9.70
	2,4,5-T	80.8	90.9	102			11.7
	2,4,5-T	81.6	114	99.8			12.9
	Acesulfame K	93.2	113	121			6.32
	Acetaminophen	87.3	104	98.3			5.21
	Acetaminophen	71.6	79.6	84.5			5.99
	Acetamiprid	93.4	71.7	70.5			1.59
	Acetamiprid	85.6	40.5	44.6			9.79
	Afidopyropen	78.9	75.4	75.7			0.494
	Afidopyropen	88.6	51.9	92.8			56.6
	AMPA	74.6	64.2	62.1			3.05
	Bentazon	137	159	153			3.94
	Bentazon	118	81.7	66.0			12.7
	Benzovindiflupyr	88.3	77.9	77.7			0.209
	Benzovindiflupyr	61.0	52.1	66.6			24.4
	Carbamazepine	66.2	56.9	54.2			4.86
	Carbamazepine	67.9	36.7	40.3			9.33
	Clothianidin	95.4	115	102			12.0
	Clothianidin	87.2					2.54
	Dinotefuran	114	104	86.7			17.7
	Dinotefuran	109	80.2	77.0			4.05
	Diuron	63.2	26.8	47.0			54.7
	Diuron	61.8	36.9	38.7			4.64
	Endothall	93.3	102	97.4			4.58
	Fenuron	94.7	75.5	70.4			7.00
	Fenuron	95.7	49.5	50.3			1.61
	Fluridone	102	91.6	86.4			5.83
	Fluridone	97.4	56.7	72.9			24.9
	Glufosinate	86.6	92.7	78.5			16.5
	Glyphosate	97.1	90.6	96.6			5.25
	Hydrocodone	97.6	77.7	74.9			3.60
	Hydrocodone	111	56.9	57.8			1.57
	Ibuprofen	72.2	76.1	77.3			1.65
	Ibuprofen	69.4	68.2	69.4			1.69
	Imazapyr	77.6	83.6	85.1			1.53
	Imazapyr	100	90.9	74.9			12.1
	Imidacloprid	86.8	124	120			3.22
	Imidacloprid	84.0					14.0
	Linuron	73.7	55.4	58.9			6.05
	Linuron	71.9	62.6	54.5			13.8
	Mandestrobin	95.5	85.1	86.8			2.00

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Mandestrobin	94.6	68.8	83.0		18.7
	MCPP	90.8	97.6	103		5.49
	MCPP	90.3	107	111		4.26
	Naproxen	76.1	62.7	70.6		11.9
	Naproxen	66.6	65.2	66.8		2.50
	Primidone	79.2	88.6	87.4		1.33
	Primidone	85.4	72.2	74.4		3.06
	Pyraclostrobin	71.5	75.0	78.3		4.30
	Pyraclostrobin	75.8	55.4	67.9		20.1
	Silvex	89.4	108	101		6.40
	Silvex	93.2	101	102		0.709
	Sucralose	85.4	84.5	87.1		3.04
	Thiamethoxam	99.0	104	96.6		7.56
	Thiamethoxam	82.7	60.6	73.9		19.8
	Tolfenpyrad	44.3	51.0	54.3		6.16
	Tolfenpyrad	74.0	72.2	60.6		17.4
	Triclopyr	82.4	91.4	94.2		3.01
	Triclopyr	85.0	107	111		3.93
SM 2320 B-2011	Total Alkalinity	96.1			1.03	
SM 2540 C-2015	TDS	96.8			7.36	
SM 2540 D-2015	TSS	89.7				
SM 4500-F- C-2011	Fluoride	98.2	99.1	101		0.959
SM 5310 B-2011	Organic Carbon	94.8	96.6	96.0		0.448

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2428642, 2428643, 2428646, 2428647
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2428642, 2428643, 2428646, 2428647
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2428642, 2428643, 2428646, 2428647
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2428642, 2428643, 2428646, 2428647
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2428644, 2428645, 2428648, 2428649
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2428644, 2428645, 2428648, 2428649
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2428644, 2428645, 2428648, 2428649
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2428644, 2428645, 2428648, 2428649
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2428663, 2428665, 2428666
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2428642, 2428643, 2428646, 2428647
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2428642, 2428643, 2428646, 2428647
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2428642, 2428643, 2428646, 2428647
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2428642, 2428643, 2428646, 2428647
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2428644, 2428645, 2428648, 2428649

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	08/03/2023			08/03/2023 14:14	Alexis Price	2428643
	08/03/2023			08/03/2023 14:19	Alexis Price	2428646, 2428647
	08/03/2023			08/03/2023 14:22	Alexis Price	2428642
EPA 180.1 Rev. 2.0	08/03/2023			08/03/2023 13:37	Anna M. Plaviak	2428642
	08/03/2023			08/03/2023 13:38	Anna M. Plaviak	2428643
	08/03/2023			08/03/2023 13:42	Anna M. Plaviak	2428646
EPA 300.0 Rev. 2.1	08/03/2023			08/03/2023 13:45	Anna M. Plaviak	2428647
	08/03/2023			08/05/2023 01:35	James L Waggeberby	2428642
	08/03/2023			08/05/2023 01:50	James L Waggeberby	2428643
EPA 350.1 Rev. 2.0	08/03/2023			08/08/2023 12:52	James L Waggeberby	2428646
	08/03/2023			08/08/2023 13:07	James L Waggeberby	2428647
	08/03/2023			08/08/2023 12:21	Khloe J Berg	2428648
EPA 351.2 Rev. 2.0	08/03/2023			08/08/2023 12:22	Khloe J Berg	2428649
	08/03/2023			08/08/2023 12:46	Khloe J Berg	2428644
	08/03/2023			08/08/2023 12:47	Khloe J Berg	2428645
EPA 353.2 Rev. 2.0	08/03/2023	08/04/2023 10:07	Dana G. Hughes	08/07/2023 12:37	Samantha L Bates	2428644
	08/03/2023	08/04/2023 10:07	Dana G. Hughes	08/07/2023 12:39	Samantha L Bates	2428645
	08/03/2023	08/04/2023 10:07	Dana G. Hughes	08/07/2023 12:41	Samantha L Bates	2428648
EPA 365.1 Rev. 2.0	08/03/2023	08/04/2023 10:07	Dana G. Hughes	08/07/2023 12:42	Samantha L Bates	2428649
	08/03/2023			08/04/2023 11:02	Beverly Y. Sanders	2428644
	08/03/2023			08/04/2023 11:03	Beverly Y. Sanders	2428645
EPA 8321B	08/03/2023			08/04/2023 11:38	Beverly Y. Sanders	2428648
	08/03/2023			08/04/2023 11:39	Beverly Y. Sanders	2428649
	08/03/2023	08/07/2023 16:18	Adam P Silver	08/08/2023 11:33	Chandler E Cox	2428648
EPA 8321B	08/03/2023	08/07/2023 16:18	Adam P Silver	08/08/2023 11:34	Chandler E Cox	2428649
	08/03/2023	08/07/2023 16:18	Adam P Silver	08/09/2023 12:04	Chandler E Cox	2428645
	08/03/2023	08/10/2023 17:20	Adam P Silver	08/11/2023 09:44	James L Waggeberby	2428644
SM 2320 B-2011	08/03/2023	08/03/2023 13:00	Hoor Shaik	08/05/2023 11:41	Juyoung Kim	2428663
	08/03/2023	08/07/2023 10:00	Tae K Lee	08/07/2023 15:03	Hana Lee	2428663
	08/03/2023	08/07/2023 10:00	Tae K Lee	08/07/2023 15:16	Hana Lee	2428665
SM 2320 B-2011	08/03/2023	08/07/2023 10:00	Tae K Lee	08/07/2023 15:29	Hana Lee	2428666
	08/03/2023	08/07/2023 10:00	Tae K Lee	08/07/2023 23:22	Hana Lee	2428663
	08/03/2023	08/07/2023 10:00	Tae K Lee	08/07/2023 23:35	Hana Lee	2428665
SM 2320 B-2011	08/03/2023	08/07/2023 10:00	Tae K Lee	08/07/2023 23:50	Hana Lee	2428666
	08/03/2023	08/09/2023 09:00	Hoor Shaik	08/15/2023 01:49	Juyoung Kim	2428665
	08/03/2023	08/09/2023 09:00	Hoor Shaik	08/15/2023 02:08	Juyoung Kim	2428666
SM 2320 B-2011	08/03/2023			08/08/2023 01:20	Dale L. Simmons	2428642
	08/03/2023			08/08/2023 01:30	Dale L. Simmons	2428643
	08/03/2023			08/08/2023 01:42	Dale L. Simmons	2428646
SM 2320 B-2011	08/03/2023			08/08/2023 01:55	Dale L. Simmons	2428647

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2540 C-2015	08/03/2023			08/04/2023 16:14	Yijie Li	2428642, 2428643, 2428646, 2428647
SM 2540 D-2015	08/03/2023			08/04/2023 16:14	Yijie Li	2428642, 2428643, 2428646, 2428647
SM 4500-F- C-2011	08/03/2023			08/08/2023 01:20	Dale L. Simmons	2428642
	08/03/2023			08/08/2023 01:30	Dale L. Simmons	2428643
	08/03/2023			08/08/2023 01:42	Dale L. Simmons	2428646
	08/03/2023			08/08/2023 01:55	Dale L. Simmons	2428647
SM 5310 B-2011	08/03/2023			08/08/2023 03:01	Elise M. Gillis	2428644
	08/03/2023			08/08/2023 03:15	Elise M. Gillis	2428645
	08/03/2023			08/08/2023 03:29	Elise M. Gillis	2428648
	08/03/2023			08/08/2023 03:43	Elise M. Gillis	2428649