

Chemical Analysis Report

SW-DIST-2023-06-22-01

Florida DEP Laboratory
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DOH Accreditation E31780

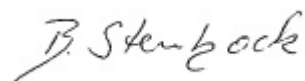
Event Description: **SMP:: Run 13**
Request ID: **RQ-2023-06-19-14**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 11-JUL-2023 11:53



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: 06/21/2023 09:45

Field ID: G2SW0093

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2419423	EPA 8321B	2,4-D	0.0020	U	ug/L	P431822	
		Acesulfame K	0.10	U	ug/L	P431715	
		2,4,5-T	0.0040	U	ug/L	P431822	
		AMPA	0.10	U	ug/L	P431715	
		Acetaminophen	0.0080	U	ug/L	P431822	
		Acetamiprid	0.0020	U	ug/L	P431822	
		Endothall	0.25	U	ug/L	P431715	
		Glufosinate	0.10	U	ug/L	P431715	
		Glyphosate	0.10	U	ug/L	P431715	
		Afidopyropen	0.0020	U	ug/L	P431822	
		Bentazon	8.0E-04	U	ug/L	P431822	
		Sucralose	0.22		ug/L	P431715	
		Benzovindiflupyr	0.0020	U	ug/L	P431822	
		Carbamazepine	8.0E-04	U	ug/L	P431822	
		Clothianidin	0.0020	U	ug/L	P431822	
		Dinotefuran	0.0020	U	ug/L	P431822	
		Diuron	0.0020	UJ	ug/L	P431822	MS
		Fenuron	0.032	U	ug/L	P431822	
		Fluridone	0.0024	I	ug/L	P431822	
		Imazapyr	0.0040	U	ug/L	P431822	
		Hydrocodone	0.0020	U	ug/L	P431822	
		Ibuprofen	0.080	U	ug/L	P431822	
		Imidacloprid	0.0020	U	ug/L	P431822	
		Linuron	0.0040	U	ug/L	P431822	
		Mandestrobin	0.0020	U	ug/L	P431822	
		MCPP	0.0020	U	ug/L	P431822	
		Naproxen	0.0080	U	ug/L	P431822	
		Primidone	0.0040	U	ug/L	P431822	
		Pyraclostrobin	0.0020	U	ug/L	P431822	
		Silvex	0.0040	U	ug/L	P431822	
		Thiamethoxam	0.0020	U	ug/L	P431822	
		Tolfenpyrad	0.0020	U	ug/L	P431822	
		Triclopyr	0.0040	U	ug/L	P431822	

Ref. Method and Comment:

EPA 8321B: 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: 06/21/2023 10:00**

Field ID: G2SW0160

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2419403	DEP SOP: NU-094-1	Color (true)	98		PCU	P431665	
	EPA 180.1 Rev. 2.0	Turbidity	5.3		NTU	P431664	
	EPA 300.0 Rev. 2.1	Chloride	18		mg Cl/L	P431914	
		Sulfate	29		mg SO4/L	P431833	
	SM 2320 B-2011	Total Alkalinity	34		mg CaCO3/L	P431955	
	SM 2540 C-2015	TDS	132		mg/L	P432043	
	SM 2540 D-2015	TSS	6	I	mg/L	P432045	
	SM 4500-F- C-2011	Fluoride	0.52		mg F/L	P431774	
2419405	EPA 350.1 Rev. 2.0	Ammonia-N	0.032		mg N/L	P431800	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.76		mg N/L	P431798	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.85		mg N/L	P431998	
	EPA 365.1 Rev. 2.0	Total-P	0.72		mg P/L	P431780	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P431958	

Ref. Method and Comment:

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

SM 4500-F- C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Moccassin Creek at CR 39

Collection Date/Time: 06/21/2023 10:25

Field ID: G2SW0161

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2419404	DEP SOP: NU-094-1	Color (true)	94		PCU	P431665	
	EPA 180.1 Rev. 2.0	Turbidity	5.3		NTU	P431664	
	EPA 300.0 Rev. 2.1	Chloride	38		mg Cl/L	P431914	
		Sulfate	42		mg SO4/L	P431833	
	SM 2320 B-2011	Total Alkalinity	36	A	mg CaCO3/L	P431955	
	SM 2540 C-2015	TDS	200	A	mg/L	P432044	
	SM 2540 D-2015	TSS	6	IA	mg/L	P432046	
	SM 4500-F- C-2011	Fluoride	0.21		mg F/L	P431774	
2419406	EPA 350.1 Rev. 2.0	Ammonia-N	0.075		mg N/L	P431800	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P431798	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.28		mg N/L	P431998	
	EPA 365.1 Rev. 2.0	Total-P	0.17		mg P/L	P431780	
	SM 5310 B-2011	Organic Carbon	14		mg C/L	P431958	

Ref. Method and Comment:

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

SM 4500-F- C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Chito Branch at CR 39

Collection Date/Time: 06/21/2023 10:40

Field ID: G2SW0135

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2419400	DEP SOP: NU-094-1	Color (true)	480		PCU	P431665	
	EPA 180.1 Rev. 2.0	Turbidity	4.0		NTU	P431664	
	EPA 300.0 Rev. 2.1	Chloride	12		mg Cl/L	P431914	
		Sulfate	9.2		mg SO4/L	P431833	
	SM 2320 B-2011	Total Alkalinity	39		mg CaCO3/L	P431954	
	SM 2540 C-2015	TDS	147		mg/L	P432043	
	SM 2540 D-2015	TSS	2	I	mg/L	P432045	
2419401	SM 4500-F- C-2011	Fluoride	0.37		mg F/L	P431774	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.058		mg N/L	P431800	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.9		mg N/L	P431798	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.034		mg N/L	P431998	
	EPA 365.1 Rev. 2.0	Total-P	0.88		mg P/L	P431780	
2419421	SM 5310 B-2011	Organic Carbon	39		mg C/L	P431958	
	EPA 8321B	2,4-D	0.0031	I	ug/L	P431550	
		Acesulfame K	0.10	U	ug/L	P431641	
		2,4,5-T	0.0040	U	ug/L	P431550	
		AMPA	0.22	I	ug/L	P431641	
		Acetaminophen	0.0080	U	ug/L	P431550	
		Acetamiprid	0.0020	U	ug/L	P431550	
		Endothall	0.25	U	ug/L	P431641	
		Glufosinate	0.10	U	ug/L	P431641	
		Glyphosate	0.53		ug/L	P431641	
		Afidopyropen	0.0020	U	ug/L	P431550	
		Bentazon	8.0E-04	U	ug/L	P431550	
		Sucralose	0.038	I	ug/L	P431641	
		Benzovindiflupyr	0.0020	U	ug/L	P431550	
		Carbamazepine	8.0E-04	U	ug/L	P431550	
		Clothianidin	0.0020	U	ug/L	P431550	
		Dinotefuran	0.0020	U	ug/L	P431550	
		Diuron	0.0020	U	ug/L	P431550	MS
		Fenuron	0.032	U	ug/L	P431550	
		Fluridone	8.0E-04	U	ug/L	P431550	
		Imazapyr	0.074		ug/L	P431550	
		Hydrocodone	0.0020	U	ug/L	P431550	
		Ibuprofen	0.080	U	ug/L	P431550	
		Imidacloprid	0.0020	U	ug/L	P431550	
		Linuron	0.0040	U	ug/L	P431550	
		Mandestrobin	0.0020	U	ug/L	P431550	
		MCPP	0.0020	U	ug/L	P431550	
		Naproxen	0.052		ug/L	P431550	
		Primidone	0.0040	U	ug/L	P431550	
		Pyraclostrobin	0.0020	U	ug/L	P431550	
		Silvex	0.0040	U	ug/L	P431550	
		Thiamethoxam	0.0020	U	ug/L	P431550	

Field ID: G2SW0135

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2419421	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P431550	
		Triclopyr	0.0040	U	ug/L	P431550	

Ref. Method and Comment:
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
SM 4500-F- C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.
EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Fishhawk Creek at HA Site

Collection Date/Time: 06/21/2023 11:00

Field ID: G2SW0144

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2419422	EPA 8321B	2,4-D	0.013		ug/L	P431550	
		Acesulfame K	0.10	I	ug/L	P431641	
		2,4,5-T	0.0040	U	ug/L	P431550	
		AMPA	1.6		ug/L	P431641	
		Acetaminophen	0.0080	U	ug/L	P431550	
		Acetamiprid	0.0020	U	ug/L	P431550	
		Endothall	0.25	U	ug/L	P431641	
		Glufosinate	0.10	U	ug/L	P431641	
		Glyphosate	5.1		ug/L	P431641	
		Afidopyropen	0.0020	U	ug/L	P431550	
		Bentazon	0.0059		ug/L	P431550	
		Sucralose	0.46		ug/L	P431641	
		Benzovindiflupyr	0.0020	U	ug/L	P431550	
		Carbamazepine	8.0E-04	U	ug/L	P431550	
		Clothianidin	0.040		ug/L	P431550	
		Dinotefuran	0.0020	U	ug/L	P431550	
		Diuron	0.0020	U	ug/L	P431550	MS
		Fenuron	0.032	U	ug/L	P431550	
		Fluridone	8.0E-04	U	ug/L	P431550	
		Imazapyr	0.12		ug/L	P431550	
		Hydrocodone	0.0020	U	ug/L	P431550	
		Ibuprofen	0.080	U	ug/L	P431550	
		Imidacloprid	0.052		ug/L	P431550	
		Linuron	0.0040	U	ug/L	P431550	
		Mandestrobin	0.0020	U	ug/L	P431550	
		MCPP	0.0065	I	ug/L	P431550	
		Naproxen	0.0080	U	ug/L	P431550	
		Primidone	0.0040	U	ug/L	P431550	
		Pyraclostrobin	0.0051	I	ug/L	P431550	
		Silvex	0.0040	U	ug/L	P431550	
		Thiamethoxam	0.0020	U	ug/L	P431550	
		Tolfenpyrad	0.0020	U	ug/L	P431550	
		Triclopyr	0.0040	U	ug/L	P431550	

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.

Sample Location: FB

Collection Date/Time: 06/21/2023 11:15

Field ID: FB_06212023

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2419409	DEP SOP: NU-094-1	Color (true)	2.5	U	PCU	P431665	
	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P431664	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P431914	
		Sulfate	0.20	U	mg SO4/L	P431833	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P431955	
	SM 2540 C-2015	TDS	15	U	mg/L	P432043	
	SM 2540 D-2015	TSS	2	U	mg/L	P432045	
	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P431774	
2419410	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P431806	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P431798	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P431998	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P431780	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P431958	

Ref. Method and Comment:

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

SM 4500-F- C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P431665

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P431664

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431833

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431914

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P431800

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P431806

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P431798

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P431998

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P431780

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P431550

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: P431641

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: P431715

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P431822

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: P431954

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

Reference Method: SM 2320 B-2011

Batch ID: P431955

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

Reference Method: SM 2540 C-2015

Batch ID: P432043

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2015

Batch ID: P432044

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2015
Batch ID: P432045

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P432046

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P431774

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P431958

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: P431665

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.5		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P431664

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431833

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431914

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P431800

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P431806

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P431798

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P431998

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P431780

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	98.1		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P431550

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	105		P	40 - 150
2,4,5-T	86.1		P	40 - 150
Acetaminophen	95.0		P	30 - 150
Acetamiprid	84.4		P	40 - 150
Afidopyropen	64.2		P	30 - 150
Bentazon	114		P	30 - 150
Benzovindiflupyr	93.4		P	40 - 150
Carbamazepine	77.8		P	40 - 150
Clothianidin	97.9		P	40 - 150
Dinotefuran	102		P	40 - 150
Diuron	82.4		P	40 - 150
Fenuron	95.0		P	40 - 150
Fluridone	94.0		P	40 - 150
Hydrocodone	86.9		P	40 - 150
Ibuprofen	82.3		P	40 - 150
Imazapyr	95.4		P	40 - 150
Imidacloprid	74.0		P	40 - 150
Linuron	82.7		P	40 - 150
Mandestrobin	98.7		P	40 - 150
MCPP	101		P	40 - 150
Naproxen	68.7		P	40 - 150
Primidone	75.6		P	40 - 150
Pyraclostrobin	88.1		P	40 - 150
Silvex	78.9		P	40 - 150
Thiamethoxam	78.7		P	40 - 150
Tolfenpyrad	53.0		P	30 - 150
Triclopyr	93.6		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P431641

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	79.4		P	40 - 150
AMPA	95.6		P	40 - 150
Endothall	97.5		P	40 - 150
Glufosinate	100		P	40 - 150
Glyphosate	95.9		P	40 - 150
Sucralose	112		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P431715

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	112		P	40 - 150
AMPA	95.4		P	40 - 150
Endothall	92.3		P	40 - 150
Glufosinate	99.5		P	40 - 150
Glyphosate	103		P	40 - 150
Sucralose	99.0		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P431822

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	110		P	40 - 150
2,4,5-T	97.6		P	40 - 150
Acetaminophen	72.8		P	30 - 150
Acetamiprid	72.9		P	40 - 150
Afidopyropen	51.2		P	30 - 150
Bentazon	117		P	30 - 150
Benzovindiflupyr	86.3		P	40 - 150
Carbamazepine	85.7		P	40 - 150
Clothianidin	89.9		P	40 - 150
Dinotefuran	85.1		P	40 - 150
Diuron	85.2		P	40 - 150
Fenuron	88.9		P	40 - 150
Fluridone	95.5		P	40 - 150
Hydrocodone	87.7		P	40 - 150
Ibuprofen	76.4		P	40 - 150
Imazapyr	79.6		P	40 - 150
Imidacloprid	86.6		P	40 - 150
Linuron	87.3		P	40 - 150
Mandestrobin	84.3		P	40 - 150
MCPP	91.7		P	40 - 150
Naproxen	82.9		P	40 - 150
Primidone	74.9		P	40 - 150
Pyraclostrobin	76.0		P	40 - 150
Silvex	84.2		P	40 - 150
Thiamethoxam	86.4		P	40 - 150
Tolfenpyrad	53.7		P	30 - 150
Triclopyr	88.4		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P431954

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	95.8		P	92 - 105

Reference Method: SM 2320 B-2011

Batch ID: P431955

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.2		P	92 - 105

Reference Method: SM 2540 C-2015

Batch ID: P432043

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

Reference Method: SM 2540 C-2015

Batch ID: P432044

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	96.3		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2540 D-2015
Batch ID: P432045

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	98.4		P	85 - 106

Reference Method: SM 2540 D-2015
Batch ID: P432046

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	95.3		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P431774

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	105		P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P431958

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.5		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431833

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2418864	Sulfate	101		P	90 - 110
2419270	Sulfate	105		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431914

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2418864	Chloride	104		P	90 - 110
2419270	Chloride	106		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P431800

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2419273	Ammonia-N	96.6	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P431806

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2419431	Ammonia-N	97.0	97.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P431798

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2419434	Kjeldahl Nitrogen	106	110	P/F	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P431998

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2419319	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P431550

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2418216	2,4,5-T	100	101	P/P	40 - 150
2418216	Acetaminophen	93.1	85.4	P/P	30 - 150
2418216	Acetamiprid	72.7	72.9	P/P	40 - 150
2418216	Afidopyropen	51.3	64.4	P/P	30 - 150
2418216	Benzovindiflupyr	89.4	97.9	P/P	40 - 150
2418216	Carbamazepine	65.7	68.5	P/P	40 - 150
2418216	Clothianidin	98.8	89.3	P/P	40 - 150
2418216	Dinotefuran	75.0	82.9	P/P	40 - 150
2418216	Diuron	54.1	37.6	P/F	40 - 150
2418216	Fenuron	75.3	77.8	P/P	40 - 150
2418216	Fluridone	86.7	96.4	P/P	40 - 150
2418216	Hydrocodone	63.6	62.1	P/P	40 - 150
2418216	Ibuprofen	66.0	58.3	P/P	40 - 150
2418216	Linuron	76.6	71.6	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P431550

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2418216	Mandestrobin	93.2	97.1	P/P	40 - 150
2418216	MCP	115	109	P/P	40 - 150
2418216	Naproxen	64.9	86.9	P/P	40 - 150
2418216	Primidone	75.8	82.8	P/P	40 - 150
2418216	Pyraclostrobin	95.6	97.5	P/P	40 - 150
2418216	Silvex	78.9	83.6	P/P	40 - 150
2418216	Thiamethoxam	63.5	68.7	P/P	40 - 150
2418216	Tolfenpyrad	57.0	56.3	P/P	30 - 150
2418216	Triclopyr	101	104	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P431641

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2418283	Acesulfame K	92.4	94.6	P/P	40 - 150
2418283	AMPA	81.3	75.7	P/P	40 - 150
2418283	Endothall	117	122	P/P	40 - 150
2418283	Glufosinate	86.7	82.7	P/P	40 - 150
2418283	Glyphosate	96.1	99.6	P/P	40 - 150
2418283	Sucralose	95.7	89.2	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P431715

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2419423	Acesulfame K	128	129	P/P	40 - 150
2419423	AMPA	72.9	77.2	P/P	40 - 150
2419423	Endothall	106	110	P/P	40 - 150
2419423	Glufosinate	70.5	76.4	P/P	40 - 150
2419423	Glyphosate	109	115	P/P	40 - 150
2419423	Sucralose	105	99.9	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P431822

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2419423	2,4-D	107	111	P/P	40 - 150
2419423	2,4,5-T	115	111	P/P	40 - 150
2419423	Acetaminophen	66.5	79.7	P/P	30 - 150
2419423	Acetamiprid	73.4	78.2	P/P	40 - 150
2419423	Afidopyropen	52.8	57.4	P/P	30 - 150
2419423	Bentazon	78.5	91.9	P/P	30 - 150
2419423	Benzovindiflupyr	80.3	81.6	P/P	40 - 150
2419423	Carbamazepine	71.4	77.9	P/P	40 - 150
2419423	Clothianidin	93.5	109	P/P	40 - 150
2419423	Dinotefuran	79.1	91.0	P/P	40 - 150
2419423	Diuron	30.0	32.2	F/F	40 - 150
2419423	Fenuron	74.3	78.1	P/P	40 - 150
2419423	Fluridone	84.4	93.5	P/P	40 - 150
2419423	Hydrocodone	75.6	79.3	P/P	40 - 150
2419423	Ibuprofen	58.1	56.4	P/P	40 - 150
2419423	Imazapyr	80.0	92.9	P/P	40 - 150

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P431822

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2419423	Imidacloprid	113	126	P/P	40 - 150
2419423	Linuron	58.4	67.4	P/P	40 - 150
2419423	Mandestrobin	83.4	85.8	P/P	40 - 150
2419423	MCPP	110	126	P/P	40 - 150
2419423	Naproxen	74.3	81.7	P/P	40 - 150
2419423	Primidone	79.2	95.3	P/P	40 - 150
2419423	Pyraclostrobin	80.5	84.2	P/P	40 - 150
2419423	Silvex	92.3	103	P/P	40 - 150
2419423	Thiamethoxam	87.6	88.9	P/P	40 - 150
2419423	Tolfenpyrad	55.3	64.9	P/P	30 - 150
2419423	Triclopyr	101	110	P/P	40 - 150

Reference Method: SM 5310 B-2011

Batch ID: P431958

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2418942	Organic Carbon	94.6	96.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P431665

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419221	Color (true)	1.07	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P431664

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419268	Turbidity	3.15	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431833

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418864	Sulfate	1.22	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431914

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418864	Chloride	0.348	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P431800

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419273	Ammonia-N	2.59	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P431806

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419431	Ammonia-N	0.780	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P431798

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419434	Kjeldahl Nitrogen	2.73	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P431998

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419319	NO2NO3-N	0.980	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P431780

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419401	Total-P	1.15	Spike	P	0 - 20

Reference Method: EPA 8321B

Batch ID: P431550

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418216	2,4-D	0.743	Spike	P	0 - 30
2418216	2,4,5-T	0.391	Spike	P	0 - 30
2418216	Acetaminophen	8.58	Spike	P	0 - 30
2418216	Acetamiprid	0.230	Spike	P	0 - 30
2418216	Afidopyropen	22.6	Spike	P	0 - 30
2418216	Bentazon	1.12	Spike	P	0 - 30
2418216	Benzovindiflupyr	9.04	Spike	P	0 - 30
2418216	Carbamazepine	4.24	Spike	P	0 - 30
2418216	Clothianidin	10.1	Spike	P	0 - 30
2418216	Dinotefuran	10.0	Spike	P	0 - 30
2418216	Diuron	28.5	Spike	P	0 - 30
2418216	Fenuron	3.25	Spike	P	0 - 30
2418216	Fluridone	7.68	Spike	P	0 - 30
2418216	Hydrocodone	2.40	Spike	P	0 - 30
2418216	Ibuprofen	12.4	Spike	P	0 - 30
2418216	Imazapyr	2.11	Spike	P	0 - 30
2418216	Imidacloprid	1.56	Spike	P	0 - 30
2418216	Linuron	6.73	Spike	P	0 - 30
2418216	Mandestrobin	4.08	Spike	P	0 - 30
2418216	MCP	4.84	Spike	P	0 - 30
2418216	Naproxen	29.0	Spike	P	0 - 30
2418216	Primidone	8.84	Spike	P	0 - 30
2418216	Pyraclostrobin	2.04	Spike	P	0 - 30
2418216	Silvex	5.76	Spike	P	0 - 30
2418216	Thiamethoxam	7.92	Spike	P	0 - 30
2418216	Tolfenpyrad	1.28	Spike	P	0 - 30
2418216	Triclopyr	2.66	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P431641

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418283	Acesulfame K	2.35	Spike	P	0 - 30
2418283	AMPA	7.09	Spike	P	0 - 30
2418283	Endothall	4.22	Spike	P	0 - 30
2418283	Glufosinate	4.79	Spike	P	0 - 30
2418283	Glyphosate	3.60	Spike	P	0 - 30
2418283	Sucralose	2.90	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P431715

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419423	Acesulfame K	0.529	Spike	P	0 - 30
2419423	AMPA	5.77	Spike	P	0 - 30
2419423	Endothall	4.41	Spike	P	0 - 30
2419423	Glufosinate	8.08	Spike	P	0 - 30
2419423	Glyphosate	5.92	Spike	P	0 - 30
2419423	Sucralose	4.67	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P431822

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419423	2,4-D	3.67	Spike	P	0 - 30
2419423	2,4,5-T	2.94	Spike	P	0 - 30
2419423	Acetaminophen	18.0	Spike	P	0 - 30
2419423	Acetamiprid	6.32	Spike	P	0 - 30
2419423	Afidopyropen	8.40	Spike	P	0 - 30
2419423	Bentazon	15.8	Spike	P	0 - 30
2419423	Benzovindiflupyr	1.67	Spike	P	0 - 30
2419423	Carbamazepine	8.79	Spike	P	0 - 30
2419423	Clothianidin	15.1	Spike	P	0 - 30
2419423	Dinotefuran	14.0	Spike	P	0 - 30
2419423	Diuron	7.21	Spike	P	0 - 30
2419423	Fenuron	4.99	Spike	P	0 - 30
2419423	Fluridone	8.93	Spike	P	0 - 30
2419423	Hydrocodone	4.83	Spike	P	0 - 30
2419423	Ibuprofen	2.93	Spike	P	0 - 30
2419423	Imazapyr	14.9	Spike	P	0 - 30
2419423	Imidacloprid	11.0	Spike	P	0 - 30
2419423	Linuron	14.4	Spike	P	0 - 30
2419423	Mandestrobin	2.83	Spike	P	0 - 30
2419423	MCPP	13.5	Spike	P	0 - 30
2419423	Naproxen	9.51	Spike	P	0 - 30
2419423	Primidone	18.5	Spike	P	0 - 30
2419423	Pyraclostrobin	4.48	Spike	P	0 - 30
2419423	Silvex	10.9	Spike	P	0 - 30
2419423	Thiamethoxam	1.43	Spike	P	0 - 30
2419423	Tolfenpyrad	16.0	Spike	P	0 - 30
2419423	Triclopyr	8.50	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P431954

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419268	Total Alkalinity	0.244	Sample	P	0 - 3.9

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P431955

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419404	Total Alkalinity	0.900	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P432043

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418552	TDS	3.92	Sample	P	0 - 10

Reference Method: SM 2540 C-2015
Batch ID: P432044

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419404	TDS	4.51	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P431774

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418853	Fluoride	1.45	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P431958

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418942	Organic Carbon	1.82	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2419421

Field Sample ID: G2SW0135

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	68.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	73.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	40.4	P	30 - 160
EPA 8321B	Diuron-d6	40.0	P	30 - 160
EPA 8321B	Endothall-d6	134	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	93.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	59.2	P	30 - 160
EPA 8321B	Primidone-d5	48.9	P	30 - 160
EPA 8321B	Sucralose-d6	97.7	P	30 - 160

Lab Sample ID: 2419422

Field Sample ID: G2SW0144

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	81.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	69.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	39.7	P	30 - 160
EPA 8321B	Diuron-d6	38.1	P	30 - 160
EPA 8321B	Endothall-d6	131	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	95.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	62.0	P	30 - 160
EPA 8321B	Primidone-d5	64.1	P	30 - 160
EPA 8321B	Sucralose-d6	99.2	P	30 - 160

Lab Sample ID: 2419423

Field Sample ID: G2SW0093

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	115	P	30 - 160
EPA 8321B	Acetaminophen-d4	77.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	71.4	P	30 - 160
EPA 8321B	Diuron-d6	60.1	P	30 - 160
EPA 8321B	Endothall-d6	115	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	112	P	30 - 160
EPA 8321B	Ibuprofen-d3	68.7	P	30 - 160
EPA 8321B	Primidone-d5	84.9	P	30 - 160
EPA 8321B	Sucralose-d6	95.1	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A119978

Included Lab Sample IDs: 2419400, 2419403, 2419404, 2419409

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	101	P/P	95 - 105

Reference Method: DEP SOP: NU-094-1

Run ID: A119979

Included Lab Sample IDs: 2419400, 2419403, 2419404, 2419409

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	100	P/P	90 - 110
Color (true)	102	101	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A120036

Included Lab Sample IDs: 2419400, 2419403, 2419404, 2419409

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	106	106	P/P	90 - 110
Fluoride	106	107	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A120041

Included Lab Sample IDs: 2419401, 2419405, 2419406, 2419410

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	96.8	98.3	P/P	90 - 110
Ammonia-N	99.9	97.9	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A120044

Included Lab Sample IDs: 2419421, 2419422, 2419423

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	102	128	P/P	60 - 160
Sucralose	91.5	91.6	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A120048

Included Lab Sample IDs: 2419421, 2419422, 2419423

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	87.0	87.8	P/P	60 - 160
Endothall	80.3	84.4	P/P	60 - 160
Glufosinate	89.8	93.2	P/P	60 - 160
Glyphosate	90.0	102	P/P	60 - 160

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A120051

Included Lab Sample IDs: 2419400, 2419403, 2419404, 2419409

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	101	P/P	90 - 110
Sulfate	102	105	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A120065

Included Lab Sample IDs: 2419401, 2419405, 2419406, 2419410

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	90.7	95.8	P/P	90 - 110
Kjeldahl Nitrogen	95.7	90.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A120076

Included Lab Sample IDs: 2419401, 2419405, 2419406

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A120078

Included Lab Sample IDs: 2419410

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.5	99.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A120095

Included Lab Sample IDs: 2419401, 2419405, 2419406, 2419410

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

Reference Method: EPA 8321B

Run ID: A120107

Included Lab Sample IDs: 2419421, 2419422

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	77.1	74.7	P/P	50 - 150
2,4,5-T	86.2	78.2	P/P	50 - 150
Acetaminophen	92.9	88.7	P/P	60 - 160
Acetamiprid	115	119	P/P	50 - 150
Afidopyropen	95.0	93.3	P/P	50 - 150
Bentazon	149	137	P/P	50 - 160
Benzovindiflupyr	124	116	P/P	50 - 150
Carbamazepine	117	108	P/P	60 - 150
Clothianidin	112	91.3	P/P	60 - 150
Dinotefuran	101	94.3	P/P	50 - 150
Diuron	119	106	P/P	60 - 160
Fenuron	117	114	P/P	60 - 150
Fluridone	115	124	P/P	60 - 160
Hydrocodone	108	94.7	P/P	60 - 150
Ibuprofen	94.6	78.1	P/P	50 - 160
Imazapyr	108	124	P/P	50 - 150
Imidacloprid	74.7	77.0	P/P	60 - 150
Linuron	143	138	P/P	60 - 150
Mandestrobin	117	118	P/P	50 - 150
MCPP	80.0	78.7	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A120107

Included Lab Sample IDs: 2419421, 2419422

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Naproxen	99.1	98.2	P/P	50 - 160
Primidone	96.6	94.9	P/P	60 - 150
Pyraclostrobin	125	131	P/P	60 - 150
Silvex	63.8	66.0	P/P	50 - 150
Thiamethoxam	92.5	67.2	P/P	50 - 150
Tolfenpyrad	107	103	P/P	60 - 150
Triclopyr	80.9	77.5	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A120108

Included Lab Sample IDs: 2419423

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	94.6	85.9	P/P	50 - 150
2,4,5-T	97.8	85.0	P/P	50 - 150
Acetaminophen	96.7	97.0	P/P	60 - 160
Acetamiprid	108	111	P/P	50 - 150
Afidopyropen	109	97.4	P/P	50 - 150
Bentazon	127	132	P/P	50 - 160
Benzovindiflupyr	112	105	P/P	50 - 150
Carbamazepine	114	113	P/P	60 - 150
Clothianidin	111	99.6	P/P	60 - 150
Dinotefuran	95.5	98.8	P/P	50 - 150
Diuron	111	124	P/P	60 - 160
Fenuron	103	106	P/P	60 - 150
Fluridone	107	107	P/P	60 - 160
Hydrocodone	113	107	P/P	60 - 150
Ibuprofen	79.5	82.3	P/P	50 - 160
Imazapyr	84.9	86.9	P/P	50 - 150
Imidacloprid	96.3	97.7	P/P	60 - 150
Linuron	91.8	104	P/P	60 - 150
Mandestrobin	109	111	P/P	50 - 150
MCPP	86.5	86.7	P/P	50 - 150
Naproxen	136	137	P/P	50 - 160
Primidone	91.8	93.3	P/P	60 - 150
Pyraclostrobin	113	110	P/P	60 - 150
Silvex	87.0	86.8	P/P	50 - 150
Thiamethoxam	106	118	P/P	50 - 150
Tolfenpyrad	103	108	P/P	60 - 150
Triclopyr	102	103	P/P	50 - 150

Reference Method: SM 2320 B-2011

Run ID: A120110

Included Lab Sample IDs: 2419400, 2419403, 2419404, 2419409

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	94.0	97.4	P/P	90 - 110

Quality Assurance Report

Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A120112

Included Lab Sample IDs: 2419401, 2419405, 2419406, 2419410

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.4	96.3	P/P	90 - 110
Organic Carbon	96.8	94.2	P/P	90 - 110

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
DEP SOP: NU-094-1	Color (true)	99.5				1.07	
EPA 180.1 Rev. 2.0	Turbidity	99.5				3.15	
EPA 300.0 Rev. 2.1	Chloride	99.5	104	106		0.348	
	Sulfate	103	101	105		1.22	
EPA 350.1 Rev. 2.0	Ammonia-N	94.8	96.6	100			2.59
	Ammonia-N	94.8	97.0	97.8			0.780
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107	106	110			2.73
EPA 353.2 Rev. 2.0	NO2NO3-N	104	102	102			0.980
EPA 365.1 Rev. 2.0	Total-P	98.1					1.15
EPA 8321B	2,4-D	105					0.743
	2,4-D	110	107	111			3.67
	2,4,5-T	86.1	100	101			0.391
	2,4,5-T	97.6	115	111			2.94
	Acesulfame K	79.4	92.4	94.6			2.35
	Acesulfame K	112	128	129			0.529
	Acetaminophen	95.0	93.1	85.4			8.58
	Acetaminophen	72.8	66.5	79.7			18.0
	Acetamiprid	84.4	72.7	72.9			0.230
	Acetamiprid	72.9	73.4	78.2			6.32
	Afidopyropen	64.2	51.3	64.4			22.6
	Afidopyropen	51.2	52.8	57.4			8.40
	AMPA	95.6	81.3	75.7			7.09
	AMPA	95.4	72.9	77.2			5.77
	Bentazon	114					1.12
	Bentazon	117	78.5	91.9			15.8
	Benzovindiflupyr	93.4	89.4	97.9			9.04
	Benzovindiflupyr	86.3	80.3	81.6			1.67
	Carbamazepine	77.8	65.7	68.5			4.24
	Carbamazepine	85.7	71.4	77.9			8.79
	Clothianidin	97.9	98.8	89.3			10.1
	Clothianidin	89.9	93.5	109			15.1
	Dinotefuran	102	75.0	82.9			10.0
	Dinotefuran	85.1	79.1	91.0			14.0
	Diuron	82.4	54.1	37.6			28.5
	Diuron	85.2	30.0	32.2			7.21
	Endothall	97.5	117	122			4.22
	Endothall	92.3	106	110			4.41
	Fenuron	95.0	75.3	77.8			3.25
	Fenuron	88.9	74.3	78.1			4.99
	Fluridone	94.0	86.7	96.4			7.68
	Fluridone	95.5	84.4	93.5			8.93
	Glufosinate	100	86.7	82.7			4.79
	Glufosinate	99.5	70.5	76.4			8.08
	Glyphosate	95.9	96.1	99.6			3.60
	Glyphosate	103	109	115			5.92
	Hydrocodone	86.9	63.6	62.1			2.40
	Hydrocodone	87.7	75.6	79.3			4.83
	Ibuprofen	82.3	66.0	58.3			12.4
	Ibuprofen	76.4	58.1	56.4			2.93
	Imazapyr	95.4					2.11
	Imazapyr	79.6	80.0	92.9			14.9
	Imidacloprid	74.0					1.56
	Imidacloprid	86.6	113	126			11.0
	Linuron	82.7	76.6	71.6			6.73

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Linuron	87.3	58.4	67.4		14.4
	Mandestrobin	98.7	93.2	97.1		4.08
	Mandestrobin	84.3	83.4	85.8		2.83
	MCPD	101	115	109		4.84
	MCPD	91.7	110	126		13.5
	Naproxen	68.7	64.9	86.9		29.0
	Naproxen	82.9	74.3	81.7		9.51
	Primidone	75.6	75.8	82.8		8.84
	Primidone	74.9	79.2	95.3		18.5
	Pyraclostrobin	88.1	95.6	97.5		2.04
	Pyraclostrobin	76.0	80.5	84.2		4.48
	Silvex	78.9	78.9	83.6		5.76
	Silvex	84.2	92.3	103		10.9
	Sucralose	112	95.7	89.2		2.90
	Sucralose	99.0	105	99.9		4.67
	Thiamethoxam	78.7	63.5	68.7		7.92
	Thiamethoxam	86.4	87.6	88.9		1.43
	Tolfenpyrad	53.0	57.0	56.3		1.28
	Tolfenpyrad	53.7	55.3	64.9		16.0
	Triclopyr	93.6	101	104		2.66
	Triclopyr	88.4	101	110		8.50
SM 2320 B-2011	Total Alkalinity	95.8			0.244	
	Total Alkalinity	97.2			0.900	
SM 2540 C-2015	TDS	102			3.92	
	TDS	96.3			4.51	
SM 2540 D-2015	TSS	98.4				
	TSS	95.3				
SM 4500-F- C-2011	Fluoride	105				1.45
SM 5310 B-2011	Organic Carbon	94.5	94.6	96.6		1.82

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2419400, 2419403, 2419404, 2419409
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2419400, 2419403, 2419404, 2419409
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2419400, 2419403, 2419404, 2419409
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2419400, 2419403, 2419404, 2419409
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2419401, 2419405, 2419406, 2419410
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2419401, 2419405, 2419406, 2419410
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2419401, 2419405, 2419406, 2419410
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2419401, 2419405, 2419406, 2419410
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2419421, 2419422, 2419423
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2419400, 2419403, 2419404, 2419409
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2419400, 2419403, 2419404, 2419409
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2419400, 2419403, 2419404, 2419409
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2419400, 2419403, 2419404, 2419409
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2419401, 2419405, 2419406, 2419410

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	06/22/2023			06/22/2023 15:10	Anna M. Plaviak	2419403
	06/22/2023			06/22/2023 15:11	Anna M. Plaviak	2419404
	06/22/2023			06/22/2023 15:12	Anna M. Plaviak	2419409
	06/22/2023			06/22/2023 15:32	Anna M. Plaviak	2419400
EPA 180.1 Rev. 2.0	06/22/2023			06/22/2023 13:34	Khloe J Berg	2419400
	06/22/2023			06/22/2023 13:36	Khloe J Berg	2419403
	06/22/2023			06/22/2023 13:37	Khloe J Berg	2419404
	06/22/2023			06/22/2023 13:38	Khloe J Berg	2419409
EPA 300.0 Rev. 2.1	06/22/2023			06/27/2023 06:16	James L Waggeberby	2419400
	06/22/2023			06/27/2023 06:31	James L Waggeberby	2419403
	06/22/2023			06/27/2023 06:46	James L Waggeberby	2419404
	06/22/2023			06/27/2023 07:01	James L Waggeberby	2419409
	06/22/2023			06/28/2023 14:21	James L Waggeberby	2419400
	06/22/2023			06/28/2023 14:36	James L Waggeberby	2419403
	06/22/2023			06/28/2023 14:51	James L Waggeberby	2419404
	06/22/2023			06/28/2023 15:06	James L Waggeberby	2419409
EPA 350.1 Rev. 2.0	06/22/2023			06/26/2023 11:31	Khloe J Berg	2419401
	06/22/2023			06/26/2023 11:32	Khloe J Berg	2419405
	06/22/2023			06/26/2023 11:33	Khloe J Berg	2419406
	06/22/2023			06/26/2023 13:09	Khloe J Berg	2419410
EPA 351.2 Rev. 2.0	06/22/2023	06/27/2023 10:05	Dana G. Hughes	06/28/2023 09:50	Ping Hua	2419401
	06/22/2023	06/27/2023 10:05	Dana G. Hughes	06/28/2023 09:52	Ping Hua	2419405
	06/22/2023	06/27/2023 10:05	Dana G. Hughes	06/28/2023 09:57	Ping Hua	2419406
	06/22/2023	06/27/2023 10:05	Dana G. Hughes	06/28/2023 09:58	Ping Hua	2419410
EPA 353.2 Rev. 2.0	06/22/2023			06/29/2023 11:22	Beverly Y. Sanders	2419401
	06/22/2023			06/29/2023 11:25	Beverly Y. Sanders	2419410
	06/22/2023			06/29/2023 12:29	Beverly Y. Sanders	2419405
	06/22/2023			06/29/2023 12:31	Beverly Y. Sanders	2419406
EPA 365.1 Rev. 2.0	06/22/2023	06/27/2023 13:15	Simonne.V. Calhoun	06/28/2023 14:16	Simonne.V. Calhoun	2419401
	06/22/2023	06/27/2023 13:15	Simonne.V. Calhoun	06/28/2023 14:25	Simonne.V. Calhoun	2419405
	06/22/2023	06/27/2023 13:15	Simonne.V. Calhoun	06/28/2023 14:26	Simonne.V. Calhoun	2419406
	06/22/2023	06/27/2023 13:15	Simonne.V. Calhoun	06/28/2023 15:16	Simonne.V. Calhoun	2419410
EPA 8321B	06/22/2023	06/22/2023 13:00	Hoor Shaik	06/26/2023 22:02	Juyoung Kim	2419421
	06/22/2023	06/22/2023 13:00	Hoor Shaik	06/26/2023 22:21	Juyoung Kim	2419422
	06/22/2023	06/23/2023 16:00	Hana Lee	06/24/2023 06:10	Tae K Lee	2419421
	06/22/2023	06/23/2023 16:00	Hana Lee	06/24/2023 06:24	Tae K Lee	2419422
	06/22/2023	06/23/2023 16:00	Hana Lee	06/24/2023 07:34	Tae K Lee	2419423
	06/22/2023	06/23/2023 16:00	Hana Lee	06/24/2023 18:12	Tae K Lee	2419421
	06/22/2023	06/23/2023 16:00	Hana Lee	06/24/2023 18:25	Tae K Lee	2419422
	06/22/2023	06/23/2023 16:00	Hana Lee	06/24/2023 19:30	Tae K Lee	2419423

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	06/22/2023	06/28/2023 08:30	Hoor Shaik	06/28/2023 21:38	Juyoung Kim	2419423
SM 2320 B-2011	06/22/2023			06/28/2023 21:59	Dale L. Simmons	2419400
	06/22/2023			06/28/2023 23:34	Dale L. Simmons	2419404
	06/22/2023			06/28/2023 23:56	Dale L. Simmons	2419403
	06/22/2023			06/29/2023 00:05	Dale L. Simmons	2419409
SM 2540 C-2015	06/22/2023			06/23/2023 15:19	Yijie Li	2419400, 2419403, 2419404, 2419409
SM 2540 D-2015	06/22/2023			06/23/2023 15:19	Yijie Li	2419400, 2419403, 2419404, 2419409
SM 4500-F- C-2011	06/22/2023			06/24/2023 09:03	Dale L. Simmons	2419400
	06/22/2023			06/24/2023 09:48	Dale L. Simmons	2419403
	06/22/2023			06/24/2023 10:01	Dale L. Simmons	2419404
	06/22/2023			06/24/2023 10:10	Dale L. Simmons	2419409
SM 5310 B-2011	06/22/2023			06/28/2023 15:47	Elise M. Gillis	2419406
	06/22/2023			06/28/2023 20:38	Elise M. Gillis	2419401
	06/22/2023			06/28/2023 20:52	Elise M. Gillis	2419405
	06/22/2023			06/28/2023 21:06	Elise M. Gillis	2419410