

Chemical Analysis Report

SO-DIST-2023-09-15-03

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

Event Description: **Caloosa Creeks**
Request ID: **RQ-2023-09-11-04**
Customer: **SO-DIST**
Project ID: **BMAP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901-3381
Attn: Thomas Baker

For additional information please contact
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Certified by: Colin Wright, Program Administrator

Date Certified: 04-OCT-2023 10:17



NON-CONFORMANCE REPORT INCLUDED

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: Orange river at Boat Ramp

Collection Date/Time: 09/14/2023 09:40

Field ID: G3SD0128

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2437559	DEP SOP: NU-094-1	Color (true)	35		PCU	P435080	
	EPA 180.1 Rev. 2.0	Turbidity	3.5		NTU	P435084	
	EPA 300.0 Rev. 2.1	Chloride	92		mg Cl/L	P435515	
		Sulfate	14		mg SO4/L	P435517	
	SM 2320 B-2011	Total Alkalinity	216		mg CaCO3/L	P435325	
	SM 2540 C-2015	TDS	420		mg/L	P435609	
	SM 2540 D-2015	TSS	4	I	mg/L	P435611	
	SM 4500-F- C-2011	Fluoride	0.18		mg F/L	P435328	
2437563	SM 5310 B-2011 dissolved	Organic Carbon	9.2		mg C/L	P435614	
2437567	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P435187	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.85		mg N/L	P435651	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.033		mg N/L	P435657	
	EPA 365.1 Rev. 2.0	Total-P	0.042		mg P/L	P435250	
	SM 5310 B-2011	Organic Carbon	9.8		mg C/L	P435614	
2437571	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P435096	

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: Roberts Canal at SR 80

Collection Date/Time: 09/14/2023 10:20

Field ID: G3SD0146

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2437560	DEP SOP: NU-094-1	Color (true)	150		PCU	P435080	
	EPA 180.1 Rev. 2.0	Turbidity	6.4		NTU	P435084	
	EPA 300.0 Rev. 2.1	Chloride	25		mg Cl/L	P435515	
		Sulfate	32		mg SO4/L	P435517	
	SM 2320 B-2011	Total Alkalinity	151		mg CaCO3/L	P435325	
	SM 2540 C-2015	TDS	294		mg/L	P435609	
	SM 2540 D-2015	TSS	5	I	mg/L	P435611	
	SM 4500-F- C-2011	Fluoride	0.25		mg F/L	P435328	
2437564	SM 5310 B-2011 dissolved	Organic Carbon	20		mg C/L	P435614	
2437568	EPA 350.1 Rev. 2.0	Ammonia-N	0.075		mg N/L	P435187	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P435651	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.076		mg N/L	P435657	
	EPA 365.1 Rev. 2.0	Total-P	0.078		mg P/L	P435250	
	SM 5310 B-2011	Organic Carbon	20		mg C/L	P435614	
2437572	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.041		mg P/L	P435106	

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: Nine Mile Canal at SR 80

Collection Date/Time: 09/14/2023 11:00

Field ID: G3SD0088

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2437561	DEP SOP: NU-094-1	Color (true)	150		PCU	P435080	
	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P435084	
	EPA 300.0 Rev. 2.1	Chloride	35		mg Cl/L	P435515	
		Sulfate	30		mg SO4/L	P435517	
	SM 2320 B-2011	Total Alkalinity	151		mg CaCO3/L	P435325	
	SM 2540 C-2015	TDS	314		mg/L	P435609	
	SM 2540 D-2015	TSS	5	I	mg/L	P435611	
	SM 4500-F- C-2011	Fluoride	0.28		mg F/L	P435328	
2437565	SM 5310 B-2011 dissolved	Organic Carbon	21		mg C/L	P435614	
2437569	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P435187	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.6		mg N/L	P435651	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.016		mg N/L	P435657	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P435250	
	SM 5310 B-2011	Organic Carbon	21		mg C/L	P435614	
2437573	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.068		mg P/L	P435106	

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: Bee Branch at Loblolly Bay Rd

Collection Date/Time: 09/14/2023 12:00

Field ID: G3SD0085

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2437579	DEP SOP: NU-094-1	Color (true)	280		PCU	P435080	
	EPA 180.1 Rev. 2.0	Turbidity	2.2		NTU	P435084	
	EPA 300.0 Rev. 2.1	Chloride	18		mg Cl/L	P435515	
		Sulfate	4.0		mg SO4/L	P435517	
	SM 2320 B-2011	Total Alkalinity	10		mg CaCO3/L	P435325	
	SM 2540 C-2015	TDS	116		mg/L	P435609	
	SM 2540 D-2015	TSS	3	I	mg/L	P435611	
	SM 4500-F- C-2011	Fluoride	0.069	I	mg F/L	P435328	
2437580	SM 5310 B-2011 dissolved	Organic Carbon	28		mg C/L	P435614	
2437581	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P435187	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P435651	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.060		mg N/L	P435657	
	EPA 365.1 Rev. 2.0	Total-P	0.074		mg P/L	P435308	
	SM 5310 B-2011	Organic Carbon	28		mg C/L	P435614	
2437582	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.044		mg P/L	P435106	
2437599	EPA 8321B	2,4-D	0.0020	U	ug/L	P435061	
		Acesulfame K	0.10	U	ug/L	P434981	
		2,4,5-T	0.0040	U	ug/L	P435061	
		AMPA	0.10	U	ug/L	P434981	
		Acetaminophen	0.0080	U	ug/L	P435061	
		Acetamiprid	0.0020	U	ug/L	P435061	
		Endothall	0.25	U	ug/L	P434981	
		Glufosinate	0.10	U	ug/L	P434981	
		Glyphosate	0.10	U	ug/L	P434981	
		Afidopyropen	0.0020	U	ug/L	P435061	
		Sucralose	0.013	I	ug/L	P434981	
		Bentazon	8.0E-04	U	ug/L	P435061	MS
		Benzovindiflupyr	0.0020	U	ug/L	P435061	
		Carbamazepine	8.0E-04	U	ug/L	P435061	
		Clothianidin	0.0020	U	ug/L	P435061	
		Dinotefuran	0.0020	U	ug/L	P435061	
		Diuron	0.0020	U	ug/L	P435061	
		Fenuron	0.032	U	ug/L	P435061	
		Fluridone	8.0E-04	U	ug/L	P435061	
		Imazapyr	0.0040	U	ug/L	P435061	
		Hydrocodone	0.0020	U	ug/L	P435061	
		Ibuprofen	0.080	U	ug/L	P435061	
		Imidacloprid	0.011		ug/L	P435061	
		Linuron	0.0040	U	ug/L	P435061	
		Mandestrobin	0.0020	U	ug/L	P435061	
		MCP	0.0020	U	ug/L	P435061	
		Naproxen	0.0080	U	ug/L	P435061	MS
		Primidone	0.0040	U	ug/L	P435061	

Field ID: G3SD0085

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2437599	EPA 8321B	Pyraclostrobin	0.0020	U	ug/L	P435061	
		Silvex	0.0040	U	ug/L	P435061	
		Thiamethoxam	0.0020	U	ug/L	P435061	
		Tolfenpyrad	0.0020	U	ug/L	P435061	
		Triclopyr	0.0040	U	ug/L	P435061	

Ref. Method and Comment:
SM 2540 D-2015: Batch relative percent difference is unavailable because of low 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: FB

Collection Date/Time: 09/14/2023 12:05

Field ID: FB_09142023

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2437575	DEP SOP: NU-094-1	Color (true)	2.5	U	PCU	P435080	
	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P435084	
	EPA 300.0 Rev. 2.1	Sulfate	0.20	U	mg SO4/L	P435517	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P435325	
	SM 2540 C-2015	TDS	15	U	mg/L	P435609	
	SM 2540 D-2015	TSS	2	U	mg/L	P435611	
	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P435328	
2437576	SM 5310 B-2011 dissolved	Organic Carbon	0.50	I	mg C/L	P435614	
2437577	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P435187	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P435651	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P435657	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P435308	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P435614	
2437578	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P435106	
2437598	EPA 8321B	2,4-D	0.0020	U	ug/L	P435061	
		Acesulfame K	0.10	U	ug/L	P434981	
		2,4,5-T	0.0040	U	ug/L	P435061	
		AMPA	0.10	U	ug/L	P434981	
		Acetaminophen	0.0080	U	ug/L	P435061	
		Acetamiprid	0.0020	U	ug/L	P435061	
		Endothall	0.25	U	ug/L	P434981	
		Glufosinate	0.10	U	ug/L	P434981	
		Glyphosate	0.10	U	ug/L	P434981	
		Afidopyropen	0.0020	U	ug/L	P435061	
		Sucralose	0.010	U	ug/L	P434981	
		Bentazon	8.0E-04	U	ug/L	P435061	MS
		Benzovindiflupyr	0.0020	U	ug/L	P435061	
		Carbamazepine	8.0E-04	U	ug/L	P435061	
		Clothianidin	0.0020	U	ug/L	P435061	
		Dinotefuran	0.0020	U	ug/L	P435061	
		Diuron	0.0020	U	ug/L	P435061	
		Fenuron	0.032	U	ug/L	P435061	
		Fluridone	8.0E-04	U	ug/L	P435061	
		Imazapyr	0.0040	U	ug/L	P435061	
		Hydrocodone	0.0020	U	ug/L	P435061	
		Ibuprofen	0.080	U	ug/L	P435061	
		Imidacloprid	0.0020	U	ug/L	P435061	
		Linuron	0.0040	U	ug/L	P435061	
		Mandestrobin	0.0020	U	ug/L	P435061	
		MCP	0.0020	U	ug/L	P435061	
		Naproxen	0.0080	U	ug/L	P435061	MS
		Primidone	0.0040	U	ug/L	P435061	
		Pyraclostrobin	0.0020	U	ug/L	P435061	

Field ID: FB_09142023

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2437598	EPA 8321B	Silvex	0.0040	U	ug/L	P435061	
		Thiamethoxam	0.0020	U	ug/L	P435061	
		Tolfenpyrad	0.0020	U	ug/L	P435061	
		Triclopyr	0.0040	U	ug/L	P435061	

Ref. Method and Comment:
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
SM 5310 B-2011 dissolved: The result was confirmed on 09/28/2023.
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Telegraph Creek Sonde at USGS Sonde Station Collection Date/Time: 09/14/2023 12:50

Field ID: G3SD0129

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2437562	DEP SOP: NU-094-1	Color (true)	110		PCU	P435080	
	EPA 180.1 Rev. 2.0	Turbidity	5.6		NTU	P435084	
	EPA 300.0 Rev. 2.1	Chloride	36		mg Cl/L	P435515	
		Sulfate	6.9		mg SO4/L	P435517	
	SM 2320 B-2011	Total Alkalinity	233		mg CaCO3/L	P435325	
	SM 2540 C-2015	TDS	344		mg/L	P435609	
	SM 2540 D-2015	TSS	5	I	mg/L	P435611	
	SM 4500-F- C-2011	Fluoride	0.13		mg F/L	P435328	
2437566	SM 5310 B-2011 dissolved	Organic Carbon	18		mg C/L	P435614	
2437570	EPA 350.1 Rev. 2.0	Ammonia-N	0.025	Y	mg N/L	P435187	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0	Y	mg N/L	P435651	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.082	Y	mg N/L	P435657	
	EPA 365.1 Rev. 2.0	Total-P	0.065	Y	mg P/L	P435250	
	SM 5310 B-2011	Organic Carbon	18	Y	mg C/L	P435614	
2437574	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.030		mg P/L	P435106	

Ref. Method and Comment:

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

EPA 350.1 Rev. 2.0: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

EPA 351.2 Rev. 2.0: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

EPA 353.2 Rev. 2.0: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

EPA 365.1 Rev. 2.0: Total-P: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

SM 5310 B-2011: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

Non-Conformance Report

NCR ID: 10072

Event(s)

SO-DIST-2023-09-15-03

Job(s)

TLH-2023-09-15-59

Sample(s)

2437570

Test(s)

NCR Type: SHIPPING/RECEIVING

NCR Category: Preservation Not Intact

Observation: Sample(s) not preserved to pH < 2.

Resolution: Sample preserved in the laboratory at 10:30 with sulfuric acid. Lot SA3013020, expiration 01/25/24.

Authorized by/Date: Colin Wright 10/4/2023

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry	Colin Wright	(850) 245-8085
Biology	Cheryl Swanson	(850) 245-8177

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P435080

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P435084

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435515

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435517

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435187

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435651

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P435657

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435250

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435308

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P435096

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P435106

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

Reference Method: EPA 8321B
Batch ID: P434981

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: P435061

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P435325

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

Reference Method: SM 2540 C-2015
Batch ID: P435609

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P435611

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P435328

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P435614

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

Reference Method: SM 5310 B-2011 dissolved
Batch ID: P435614

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: P435080

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.4		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P435084

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435515

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435517

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435187

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435651

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P435657

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435250

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435308

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P435096

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.3		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P435106

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

Reference Method: EPA 8321B
Batch ID: P434981

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	101		P	40 - 150
AMPA	110		P	40 - 150
Endothall	93.6		P	40 - 150
Glufosinate	106		P	40 - 150
Glyphosate	97.5		P	40 - 150
Sucralose	95.0		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P435061

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	89.0		P	40 - 150
2,4,5-T	96.3		P	40 - 150
Acetaminophen	79.0		P	30 - 150
Acetamiprid	87.8		P	40 - 150
Afidopyropen	58.0		P	30 - 150
Bentazon	82.3		P	30 - 150
Benzovindiflupyr	88.0		P	40 - 150
Carbamazepine	84.4		P	40 - 150
Clothianidin	95.1		P	40 - 150
Dinotefuran	95.2		P	40 - 150
Diuron	80.0		P	40 - 150
Fenuron	89.2		P	40 - 150
Fluridone	80.7		P	40 - 150
Hydrocodone	77.0		P	40 - 150
Ibuprofen	71.0		P	40 - 150
Imazapyr	80.6		P	40 - 150
Imidacloprid	87.1		P	40 - 150
Linuron	71.2		P	40 - 150
Mandestrobin	87.4		P	40 - 150
MCPP	111		P	40 - 150
Naproxen	87.2		P	40 - 150
Primidone	85.6		P	40 - 150
Pyraclostrobin	70.6		P	40 - 150
Silvex	99.2		P	40 - 150
Thiamethoxam	96.1		P	40 - 150
Tolfenpyrad	65.3		P	30 - 150
Triclopyr	102		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P435325

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

Reference Method: SM 2540 C-2015
Batch ID: P435609

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

Reference Method: SM 2540 D-2015
Batch ID: P435611

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	99.6		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P435328

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P435614

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.5		P	85 - 115

Reference Method: SM 5310 B-2011 dissolved
Batch ID: P435614

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.5		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435515

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437620	Chloride	107		P	90 - 110
2437626	Chloride	105		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435517

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437620	Sulfate	106		P	90 - 110
2437626	Sulfate	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435187

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437482	Ammonia-N	98.6	99.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435651

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437570	Kjeldahl Nitrogen	91.9	95.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P435657

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437470	NO2NO3-N	98.0	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435250

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437483	Total-P	110	109	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435308

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437627	Total-P	107	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P435096

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437463	O-Phosphate-P	96.5	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P435106

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437643	O-Phosphate-P	102	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P434981

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2436927	Acesulfame K	103	107	P/P	40 - 150
2436927	AMPA	59.1	60.2	P/P	40 - 150
2436927	Endothall	118	121	P/P	40 - 150
2436927	Glufosinate	116	116	P/P	40 - 150
2436927	Glyphosate	77.6	76.9	P/P	40 - 150
2436927	Sucralose	104	112	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P435061

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437002	2,4-D	99.0	92.2	P/P	40 - 150
2437002	2,4,5-T	98.0	97.7	P/P	40 - 150
2437002	Acetaminophen	69.8	68.0	P/P	30 - 150
2437002	Acetamiprid	57.6	57.8	P/P	40 - 150
2437002	Afidopyropen	73.6	67.2	P/P	30 - 150
2437002	Bentazon	29.3	29.6	F/F	30 - 150
2437002	Benzovindiflupyr	89.1	83.8	P/P	40 - 150
2437002	Carbamazepine	57.5	55.4	P/P	40 - 150
2437002	Dinotefuran	65.8	66.1	P/P	40 - 150
2437002	Diuron	49.5	47.1	P/P	40 - 150
2437002	Fenuron	41.8	40.8	P/P	40 - 150
2437002	Fluridone	52.9	52.2	P/P	40 - 150
2437002	Hydrocodone	45.8	43.9	P/P	40 - 150
2437002	Ibuprofen	56.6	61.4	P/P	40 - 150
2437002	Imazapyr	90.2	72.9	P/P	40 - 150
2437002	Linuron	57.6	51.4	P/P	40 - 150
2437002	Mandestrobin	55.3	70.8	P/P	40 - 150
2437002	MCP	108	100	P/P	40 - 150
2437002	Naproxen	460	396	F/F	40 - 150
2437002	Primidone	68.1	61.9	P/P	40 - 150
2437002	Pyraclostrobin	72.1	65.5	P/P	40 - 150
2437002	Silvex	97.3	92.0	P/P	40 - 150
2437002	Thiamethoxam	64.5	62.8	P/P	40 - 150
2437002	Tolfenpyrad	52.7	58.6	P/P	30 - 150
2437002	Triclopyr	107	97.8	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P435328

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437756	Fluoride	99.9	98.9	P/P	94 - 106

Reference Method: SM 5310 B-2011

Batch ID: P435614

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437621	Organic Carbon	95.7	98.8	P/P	85 - 115

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011 dissolved
Batch ID: P435614

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437621	Organic Carbon	95.7	98.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P435080

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437480	Color (true)	0.755	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P435084

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437469	Turbidity	7.73	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435515

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437620	Chloride	2.15	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435517

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437620	Sulfate	1.80	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435187

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437482	Ammonia-N	0.955	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435651

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437570	Kjeldahl Nitrogen	2.19	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P435657

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437470	NO2NO3-N	1.02	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435250

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437483	Total-P	0.379	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P435308

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437627	Total-P	0.860	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P435096

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437463	O-Phosphate-P	2.56	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P435106

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437643	O-Phosphate-P	0.0	Spike	P	0 - 20

Reference Method: EPA 8321B

Batch ID: P434981

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2436927	Acesulfame K	3.90	Spike	P	0 - 30
2436927	AMPA	1.99	Spike	P	0 - 30
2436927	Endothall	2.60	Spike	P	0 - 30
2436927	Glufosinate	0.0698	Spike	P	0 - 30
2436927	Glyphosate	0.959	Spike	P	0 - 30
2436927	Sucralose	7.82	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P435061

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437002	2,4-D	7.08	Spike	P	0 - 30
2437002	2,4,5-T	0.337	Spike	P	0 - 30
2437002	Acetaminophen	2.67	Spike	P	0 - 30
2437002	Acetamiprid	0.320	Spike	P	0 - 30
2437002	Afidopyropen	8.99	Spike	P	0 - 30
2437002	Bentazon	1.09	Spike	P	0 - 30
2437002	Benzovindiflupyr	6.15	Spike	P	0 - 30
2437002	Carbamazepine	3.76	Spike	P	0 - 30
2437002	Clothianidin	5.36	Spike	P	0 - 30
2437002	Dinotefuran	0.353	Spike	P	0 - 30
2437002	Diuron	4.86	Spike	P	0 - 30
2437002	Fenuron	2.64	Spike	P	0 - 30
2437002	Fluridone	1.17	Spike	P	0 - 30
2437002	Hydrocodone	4.28	Spike	P	0 - 30
2437002	Ibuprofen	8.14	Spike	P	0 - 30
2437002	Imazapyr	11.9	Spike	P	0 - 30
2437002	Imidacloprid	3.18	Spike	P	0 - 30
2437002	Linuron	11.4	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P435061

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437002	Mandestrobin	24.6	Spike	P	0 - 30
2437002	MCPD	7.91	Spike	P	0 - 30
2437002	Naproxen	14.8	Spike	P	0 - 30
2437002	Primidone	9.57	Spike	P	0 - 30
2437002	Pyraclostrobin	7.87	Spike	P	0 - 30
2437002	Silvex	5.61	Spike	P	0 - 30
2437002	Thiamethoxam	2.52	Spike	P	0 - 30
2437002	Tolfenpyrad	10.4	Spike	P	0 - 30
2437002	Triclopyr	8.76	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P435325

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437756	Total Alkalinity	0.944	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P435609

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437208	TDS	2.41	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P435328

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437756	Fluoride	0.968	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P435614

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437621	Organic Carbon	1.67	Spike	P	0 - 20

Reference Method: SM 5310 B-2011 dissolved
Batch ID: P435614

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437621	Organic Carbon	1.67	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2437598

Field Sample ID: FB_09142023

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	82.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	74.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	75.5	P	30 - 160
EPA 8321B	Diuron-d6	72.4	P	30 - 160
EPA 8321B	Endothall-d6	94.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	114	P	30 - 160
EPA 8321B	Ibuprofen-d3	59.7	P	30 - 160
EPA 8321B	Primidone-d5	78.5	P	30 - 160
EPA 8321B	Sucralose-d6	106	P	30 - 160

Lab Sample ID: 2437599

Field Sample ID: G3SD0085

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	70.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	42.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	46.6	P	30 - 160
EPA 8321B	Diuron-d6	35.4	P	30 - 160
EPA 8321B	Endothall-d6	117	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	85.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	53.0	P	30 - 160
EPA 8321B	Primidone-d5	41.2	P	30 - 160
EPA 8321B	Sucralose-d6	113	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A121567

Included Lab Sample IDs: 2437559, 2437560, 2437561, 2437562, 2437575, 2437579

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A121569

Included Lab Sample IDs: 2437559, 2437560, 2437561, 2437562, 2437575, 2437579

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	96.5	97.0	P/P	95 - 105
Turbidity	97.0	97.0	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A121572

Included Lab Sample IDs: 2437571, 2437572, 2437573, 2437574, 2437578, 2437582

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.2	99.0	P/P	90 - 110
O-Phosphate-P	99.0	96.5	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A121577

Included Lab Sample IDs: 2437598, 2437599

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	80.0	104	P/P	60 - 160
Sucralose	90.8	99.1	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A121604

Included Lab Sample IDs: 2437598, 2437599

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	99.7	104	P/P	60 - 160
Endothall	88.2	98.8	P/P	60 - 160
Glufosinate	103	97.7	P/P	60 - 160
Glyphosate	102	87.2	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A121621

Included Lab Sample IDs: 2437598, 2437599

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	78.4	73.4	P/P	50 - 150
2,4,5-T	74.3	75.3	P/P	50 - 150
Acetaminophen	101	101	P/P	60 - 160
Acetamiprid	107	108	P/P	50 - 150
Afidopyropen	103	110	P/P	50 - 150
Bentazon	102	99.2	P/P	50 - 160
Benzovindiflupyr	102	105	P/P	50 - 150
Carbamazepine	100	103	P/P	60 - 150
Clothianidin	113	109	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A121621

Included Lab Sample IDs: 2437598, 2437599

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Dinotefuran	108	108	P/P	50 - 150
Diuron	101	103	P/P	60 - 160
Fenuron	102	102	P/P	60 - 150
Fluridone	94.5	95.2	P/P	60 - 160
Hydrocodone	96.2	95.8	P/P	60 - 150
Ibuprofen	97.5	86.9	P/P	50 - 160
Imazapyr	93.8	95.3	P/P	50 - 150
Imidacloprid	94.9	95.2	P/P	60 - 150
Linuron	98.5	97.7	P/P	60 - 150
Mandestrobin	74.1	83.8	P/P	50 - 150
MCPP	83.5	87.0	P/P	50 - 150
Naproxen	85.2	66.0	P/P	50 - 160
Primidone	95.5	94.5	P/P	60 - 150
Pyraclostrobin	94.2	95.6	P/P	60 - 150
Silvex	94.2	94.2	P/P	50 - 150
Thiamethoxam	108	111	P/P	50 - 150
Tolfenpyrad	99.1	99.3	P/P	60 - 150
Triclopyr	79.9	87.9	P/P	50 - 150

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A121624

Included Lab Sample IDs: 2437567, 2437568, 2437569, 2437570, 2437577, 2437581

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.8	99.5	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A121687

Included Lab Sample IDs: 2437559, 2437560, 2437561, 2437562, 2437575, 2437579

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	93.7	97.9	P/P	90 - 110
Total Alkalinity	97.9	94.3	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A121687

Included Lab Sample IDs: 2437559, 2437560, 2437561, 2437562, 2437575, 2437579

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A121698

Included Lab Sample IDs: 2437567

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	98.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A121717

Included Lab Sample IDs: 2437581

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A121723

Included Lab Sample IDs: 2437568, 2437569, 2437570

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	103	P/P	90 - 110
Total-P	103	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A121729

Included Lab Sample IDs: 2437577

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.0	99.5	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A121771

Included Lab Sample IDs: 2437559, 2437560, 2437561, 2437562, 2437579

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	102	P/P	90 - 110
Sulfate	103	104	P/P	90 - 110
Sulfate	104	101	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A121799

Included Lab Sample IDs: 2437567, 2437568, 2437569, 2437570, 2437577, 2437581

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.7	97.0	P/P	90 - 110
Organic Carbon	97.0	97.0	P/P	90 - 110

Reference Method: SM 5310 B-2011 dissolved

Run ID: A121799

Included Lab Sample IDs: 2437563, 2437564, 2437565, 2437566, 2437576, 2437580

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.7	97.0	P/P	90 - 110
Organic Carbon	97.0	97.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A121819

Included Lab Sample IDs: 2437567, 2437568, 2437569, 2437570, 2437577, 2437581

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A121848

Included Lab Sample IDs: 2437567, 2437568, 2437569, 2437570, 2437577, 2437581

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	106	109	P/P	90 - 110
Kjeldahl Nitrogen	109	108	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)	99.4				0.755	
EPA 180.1 Rev. 2.0	Turbidity	101				7.73	
EPA 300.0 Rev. 2.1	Chloride	101	107	105		2.15	
	Sulfate	103	106	102		1.80	
EPA 350.1 Rev. 2.0	Ammonia-N	97.2	98.6	99.6			0.955
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.6	91.9	95.2			2.19
EPA 353.2 Rev. 2.0	NO2NO3-N	100	98.0	99.0			1.02
EPA 365.1 Rev. 2.0	Total-P	105	109	110			0.379
	Total-P	102	107	106			0.860
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.3	96.5	99.0			2.56
	O-Phosphate-P	99.8	102	102			0.0
EPA 8321B	2,4-D	89.0	99.0	92.2			7.08
	2,4,5-T	96.3	98.0	97.7			0.337
	Acesulfame K	101	103	107			3.90
	Acetaminophen	79.0	68.0	69.8			2.67
	Acetamiprid	87.8	57.6	57.8			0.320
	Afidopyropen	58.0	73.6	67.2			8.99
	AMPA	110	59.1	60.2			1.99
	Bentazon	82.3	29.3	29.6			1.09
	Benzovindiflupyr	88.0	89.1	83.8			6.15
	Carbamazepine	84.4	57.5	55.4			3.76
	Clothianidin	95.1					5.36
	Dinotefuran	95.2	66.1	65.8			0.353
	Diuron	80.0	49.5	47.1			4.86
	Endothall	93.6	118	121			2.60
	Fenuron	89.2	41.8	40.8			2.64
	Fluridone	80.7	52.9	52.2			1.17
	Glufosinate	106	116	116			0.0698
	Glyphosate	97.5	77.6	76.9			0.959
	Hydrocodone	77.0	43.9	45.8			4.28
	Ibuprofen	71.0	56.6	61.4			8.14
	Imazapyr	80.6	90.2	72.9			11.9
	Imidacloprid	87.1					3.18
	Linuron	71.2	57.6	51.4			11.4
	Mandestrobin	87.4	55.3	70.8			24.6
	MCPP	111	108	100			7.91
	Naproxen	87.2	460	396			14.8
	Primidone	85.6	68.1	61.9			9.57
	Pyraclostrobin	70.6	72.1	65.5			7.87
	Silvex	99.2	97.3	92.0			5.61
	Sucralose	95.0	104	112			7.82
	Thiamethoxam	96.1	64.5	62.8			2.52
	Tolfenpyrad	65.3	52.7	58.6			10.4
	Triclopyr	102	107	97.8			8.76
SM 2320 B-2011	Total Alkalinity	95.8				0.944	
SM 2540 C-2015	TDS	104				2.41	
SM 2540 D-2015	TSS	99.6					
SM 4500-F- C-2011	Fluoride	100	99.9	98.9			0.968
SM 5310 B-2011	Organic Carbon	96.5	95.7	98.8			1.67
SM 5310 B-2011 dissolved	Organic Carbon	96.5	95.7	98.8			1.67

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2437559, 2437560, 2437561, 2437562, 2437575, 2437579
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2437559, 2437560, 2437561, 2437562, 2437575, 2437579
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2437559, 2437560, 2437561, 2437562, 2437579
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2437559, 2437560, 2437561, 2437562, 2437575, 2437579
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2437567, 2437568, 2437569, 2437570, 2437577, 2437581
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2437567, 2437568, 2437569, 2437570, 2437577, 2437581
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2437567, 2437568, 2437569, 2437570, 2437577, 2437581
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2437567, 2437568, 2437569, 2437570, 2437577, 2437581
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2437571, 2437572, 2437573, 2437574, 2437578, 2437582
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2437598, 2437599
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2437559, 2437560, 2437561, 2437562, 2437575, 2437579
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2437559, 2437560, 2437561, 2437562, 2437575, 2437579
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2437559, 2437560, 2437561, 2437562, 2437575, 2437579
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2437559, 2437560, 2437561, 2437562, 2437575, 2437579
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2437567, 2437568, 2437569, 2437570, 2437577, 2437581
SM 5310 B-2011 dissolved	Dissolved Nonpurgeable Organic Carbon in filtered, aqueous matrices	2437563, 2437564, 2437565, 2437566, 2437576, 2437580

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	09/15/2023			09/15/2023 14:49	Alexis Price	2437559
	09/15/2023			09/15/2023 14:51	Alexis Price	2437561
	09/15/2023			09/15/2023 14:52	Alexis Price	2437562, 2437575
	09/15/2023			09/15/2023 15:04	Alexis Price	2437560
	09/15/2023			09/15/2023 15:05	Alexis Price	2437579
EPA 180.1 Rev. 2.0	09/15/2023			09/15/2023 13:56	Alexis Price	2437559
	09/15/2023			09/15/2023 14:00	Alexis Price	2437560
	09/15/2023			09/15/2023 14:02	Alexis Price	2437561
	09/15/2023			09/15/2023 14:03	Alexis Price	2437562
	09/15/2023			09/15/2023 14:04	Alexis Price	2437575
EPA 300.0 Rev. 2.1	09/15/2023			09/15/2023 14:05	Alexis Price	2437579
	09/15/2023			09/26/2023 01:58	James L Waggerby	2437559
	09/15/2023			09/26/2023 02:13	James L Waggerby	2437560
	09/15/2023			09/26/2023 02:28	James L Waggerby	2437561
	09/15/2023			09/26/2023 02:43	James L Waggerby	2437562
EPA 350.1 Rev. 2.0	09/15/2023			09/26/2023 02:58	James L Waggerby	2437579
	09/15/2023			09/26/2023 06:45	James L Waggerby	2437575
	09/15/2023			09/19/2023 12:07	Ping Hua	2437567
	09/15/2023			09/19/2023 12:08	Ping Hua	2437568
	09/15/2023			09/19/2023 12:09	Ping Hua	2437569
EPA 351.2 Rev. 2.0	09/15/2023			09/19/2023 12:11	Ping Hua	2437570
	09/15/2023			09/19/2023 12:12	Ping Hua	2437577
	09/15/2023			09/19/2023 12:13	Ping Hua	2437581
	09/15/2023	09/28/2023 13:28	Simonne.V. Calhoun	09/29/2023 12:04	Ping Hua	2437567
	09/15/2023	09/28/2023 13:28	Simonne.V. Calhoun	09/29/2023 12:06	Ping Hua	2437568
EPA 353.2 Rev. 2.0	09/15/2023	09/28/2023 13:28	Simonne.V. Calhoun	09/29/2023 12:08	Ping Hua	2437569
	09/15/2023	09/28/2023 13:28	Simonne.V. Calhoun	09/29/2023 12:09	Ping Hua	2437570
	09/15/2023	09/28/2023 13:28	Simonne.V. Calhoun	09/29/2023 12:17	Ping Hua	2437577
	09/15/2023	09/28/2023 13:28	Simonne.V. Calhoun	09/29/2023 12:19	Ping Hua	2437581
	09/15/2023			09/27/2023 13:56	Anna M. Plaviak	2437567
EPA 365.1 Rev. 2.0	09/15/2023			09/27/2023 13:57	Anna M. Plaviak	2437568
	09/15/2023			09/27/2023 13:59	Anna M. Plaviak	2437569
	09/15/2023			09/27/2023 14:00	Anna M. Plaviak	2437570
	09/15/2023			09/27/2023 14:01	Anna M. Plaviak	2437577
	09/15/2023			09/27/2023 14:02	Anna M. Plaviak	2437581
	09/15/2023	09/20/2023 15:00	Alexis Price	09/21/2023 14:04	Simonne.V. Calhoun	2437567
	09/15/2023	09/20/2023 15:00	Alexis Price	09/22/2023 13:48	James L Waggerby	2437568
	09/15/2023	09/20/2023 15:00	Alexis Price	09/22/2023 13:51	James L Waggerby	2437569
	09/15/2023	09/20/2023 15:00	Alexis Price	09/22/2023 13:52	James L Waggerby	2437570
	09/15/2023	09/21/2023 14:48	Adam P Silver	09/22/2023 10:10	James L Waggerby	2437581

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 365.1 Rev. 2.0	09/15/2023	09/21/2023 14:48	Adam P Silver	09/22/2023 13:45	James L Waggeberby	2437577
EPA 365.1 Rev. 2.0 dissolved	09/15/2023			09/15/2023 18:14	Adam P Silver	2437571
	09/15/2023			09/15/2023 18:26	Adam P Silver	2437572
	09/15/2023			09/15/2023 18:27	Adam P Silver	2437573, 2437574
	09/15/2023			09/15/2023 18:28	Adam P Silver	2437578
	09/15/2023			09/15/2023 18:29	Adam P Silver	2437582
EPA 8321B	09/15/2023	09/15/2023 12:00	Hana Lee	09/15/2023 22:52	Tae K Lee	2437598
	09/15/2023	09/15/2023 12:00	Hana Lee	09/15/2023 23:07	Tae K Lee	2437599
	09/15/2023	09/15/2023 12:00	Hana Lee	09/18/2023 16:23	Tae K Lee	2437598
	09/15/2023	09/15/2023 12:00	Hana Lee	09/18/2023 16:36	Tae K Lee	2437599
	09/15/2023	09/18/2023 09:00	Hoor Shaik	09/19/2023 01:25	Juyoung Kim	2437598
	09/15/2023	09/18/2023 09:00	Hoor Shaik	09/19/2023 01:43	Juyoung Kim	2437599
SM 2320 B-2011	09/15/2023			09/21/2023 02:12	Dale L. Simmons	2437559
	09/15/2023			09/21/2023 02:27	Dale L. Simmons	2437560
	09/15/2023			09/21/2023 02:41	Dale L. Simmons	2437561
	09/15/2023			09/21/2023 03:30	Dale L. Simmons	2437562
	09/15/2023			09/21/2023 03:40	Dale L. Simmons	2437575
	09/15/2023			09/21/2023 03:52	Dale L. Simmons	2437579
SM 2540 C-2015	09/15/2023			09/19/2023 15:12	Yijie Li	2437559, 2437560, 2437561, 2437562, 2437575, 2437579
SM 2540 D-2015	09/15/2023			09/19/2023 15:12	Yijie Li	2437559, 2437560, 2437561, 2437562, 2437575, 2437579
SM 4500-F- C-2011	09/15/2023			09/21/2023 02:12	Dale L. Simmons	2437559
	09/15/2023			09/21/2023 02:27	Dale L. Simmons	2437560
	09/15/2023			09/21/2023 02:41	Dale L. Simmons	2437561
	09/15/2023			09/21/2023 03:30	Dale L. Simmons	2437562
	09/15/2023			09/21/2023 03:40	Dale L. Simmons	2437575
	09/15/2023			09/21/2023 03:52	Dale L. Simmons	2437579
SM 5310 B-2011	09/15/2023			09/26/2023 19:22	Elise M. Gillis	2437567
	09/15/2023			09/26/2023 19:48	Elise M. Gillis	2437568
	09/15/2023			09/26/2023 20:17	Elise M. Gillis	2437569
	09/15/2023			09/26/2023 21:14	Elise M. Gillis	2437570
	09/15/2023			09/26/2023 21:41	Elise M. Gillis	2437577
	09/15/2023			09/26/2023 22:17	Elise M. Gillis	2437581
SM 5310 B-2011 dissolved	09/15/2023			09/26/2023 19:35	Elise M. Gillis	2437563
	09/15/2023			09/26/2023 20:04	Elise M. Gillis	2437564
	09/15/2023			09/26/2023 20:31	Elise M. Gillis	2437565
	09/15/2023			09/26/2023 21:28	Elise M. Gillis	2437566
	09/15/2023			09/26/2023 22:00	Elise M. Gillis	2437576
	09/15/2023			09/26/2023 22:31	Elise M. Gillis	2437580