Chemical Analysis Report

SO-DIST-2023-11-15-01

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

Event Description: **Caloosa Creeks**
Request ID: **RQ-2023-11-06-04**
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

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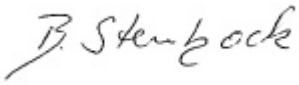
Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator Date Certified: 06-DEC-2023 16:07



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: 11/14/2023 08:10**

Field ID: G3SD0128 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2451473	DEP SOP: NU-094-1	Color (true)	30		PCU	P437806	
	EPA 180.1 Rev. 2.0	Turbidity	3.3		NTU	P437851	
	EPA 300.0 Rev. 2.1	Chloride	83		mg Cl/L	P438148	
		Sulfate	15		mg SO4/L	P438152	
	SM 2320 B-2011	Total Alkalinity	211		mg CaCO3/L	P438013	
	SM 2540 C-2015	TDS	385		mg/L	P438247	
	SM 2540 D-2015	TSS	4	I	mg/L	P438201	
	SM 4500-F- C-2011	Fluoride	0.18		mg F/L	P438017	
2451477	SM 5310 B-2011 dissolved	Organic Carbon	8.9		mg C/L	P437964	
2451481	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P438242	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.69		mg N/L	P438033	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.082		mg N/L	P438103	
	EPA 365.1 Rev. 2.0	Total-P	0.032		mg P/L	P438116	
	SM 5310 B-2011	Organic Carbon	9.2		mg C/L	P437963	
2451485	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.011		mg P/L	P437832	

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: 11/14/2023 08:55**

Field ID: G3SD0146 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2451474	DEP SOP: NU-094-1	Color (true)	54	A	PCU	P437806	
	EPA 180.1 Rev. 2.0	Turbidity	5.4		NTU	P437851	
	EPA 300.0 Rev. 2.1	Chloride	38		mg Cl/L	P438148	
		Sulfate	56		mg SO4/L	P438152	
	SM 2320 B-2011	Total Alkalinity	239		mg CaCO3/L	P438013	
	SM 2540 C-2015	TDS	423		mg/L	P438248	
	SM 2540 D-2015	TSS	4	I	mg/L	P438202	
	SM 4500-F- C-2011	Fluoride	0.38		mg F/L	P438017	
2451478	SM 5310 B-2011 dissolved	Organic Carbon	13		mg C/L	P437964	
2451482	EPA 350.1 Rev. 2.0	Ammonia-N	0.081		mg N/L	P438243	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P438033	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.25		mg N/L	P438103	
	EPA 365.1 Rev. 2.0	Total-P	0.047		mg P/L	P438116	
	SM 5310 B-2011	Organic Carbon	14		mg C/L	P437963	
2451486	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.021		mg P/L	P437832	

Sample Location: NINE MILE CANAL AT SR 80 **Collection Date/Time: 11/14/2023 09:35**

Field ID: G3SD0088 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2451475	DEP SOP: NU-094-1	Color (true)	180		PCU	P437806	
	EPA 180.1 Rev. 2.0	Turbidity	3.6		NTU	P437851	
	EPA 300.0 Rev. 2.1	Chloride	39	A	mg Cl/L	P438148	
		Sulfate	17	A	mg SO4/L	P438152	
	SM 2320 B-2011	Total Alkalinity	79		mg CaCO3/L	P438013	
	SM 2540 C-2015	TDS	210		mg/L	P438248	
	SM 2540 D-2015	TSS	5	I	mg/L	P438202	
	SM 4500-F- C-2011	Fluoride	0.14		mg F/L	P438017	
2451479	SM 5310 B-2011 dissolved	Organic Carbon	23		mg C/L	P437964	
2451483	EPA 350.1 Rev. 2.0	Ammonia-N	0.080		mg N/L	P438243	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P438033	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.087		mg N/L	P438103	
	EPA 365.1 Rev. 2.0	Total-P	0.080		mg P/L	P438116	
	SM 5310 B-2011	Organic Carbon	23		mg C/L	P437963	
2451487	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.045		mg P/L	P437832	

Sample Location: BEE BRANCH AT LOBLOLLY BAY RD **Collection Date/Time: 11/14/2023 10:30**

Field ID: G3SD0085 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2451493	DEP SOP: NU-094-1	Color (true)	160		PCU	P437806	
	EPA 180.1 Rev. 2.0	Turbidity	2.1		NTU	P437851	
	EPA 300.0 Rev. 2.1	Chloride	43		mg Cl/L	P438148	
		Sulfate	20		mg SO4/L	P438152	
	SM 2320 B-2011	Total Alkalinity	50		mg CaCO3/L	P438014	
	SM 2540 C-2015	TDS	183		mg/L	P438248	
	SM 2540 D-2015	TSS	4	I	mg/L	P438202	
	SM 4500-F- C-2011	Fluoride	0.11		mg F/L	P438018	
2451494	SM 5310 B-2011 dissolved	Organic Carbon	21		mg C/L	P437964	
2451495	EPA 350.1 Rev. 2.0	Ammonia-N	0.13		mg N/L	P438243	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P438033	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.073		mg N/L	P438095	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P438117	
	SM 5310 B-2011	Organic Carbon	22		mg C/L	P437963	
2451496	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.096		mg P/L	P437832	
2451518	EPA 8321B	2,4-D	0.0020	U	ug/L	P437880	
		Acesulfame K	0.10	U	ug/L	P437799	
		2,4,5-T	0.0040	U	ug/L	P437880	
		AMPA	0.20	I	ug/L	P437799	
		Acetaminophen	0.0080	U	ug/L	P437880	
		Acetamiprid	0.0020	U	ug/L	P437880	
		Endothall	0.25	U	ug/L	P437799	
		Glufosinate	0.10	U	ug/L	P437799	
		Glyphosate	0.16	I	ug/L	P437799	
		Afidopyropen	0.0020	U	ug/L	P437880	
		Sucralose	0.040		ug/L	P437799	
		Bentazon	8.0E-04	U	ug/L	P437880	MS
		Benzovindiflupyr	0.0020	U	ug/L	P437880	
		Carbamazepine	8.0E-04	U	ug/L	P437880	
		Clothianidin	0.0020	U	ug/L	P437880	
		Dinotefuran	0.0020	U	ug/L	P437880	
		Diuron	0.0020	U	ug/L	P437880	
		Fenuron	0.032	U	ug/L	P437880	
		Fluridone	8.0E-04	U	ug/L	P437880	
		Imazapyr	0.0040	U	ug/L	P437880	
		Hydrocodone	0.0020	U	ug/L	P437880	
		Ibuprofen	0.080	U	ug/L	P437880	
		Imidacloprid	0.022		ug/L	P437880	
		Linuron	0.0040	U	ug/L	P437880	
		Mandestrobin	0.0020	U	ug/L	P437880	
		MCPP	0.0020	U	ug/L	P437880	
		Naproxen	0.0080	U	ug/L	P437880	
		Primidone	0.0040	U	ug/L	P437880	

Field ID: G3SD0085 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2451518	EPA 8321B	Pyraclostrobin	0.0020	U	ug/L	P437880	
		Silvex	0.0040	U	ug/L	P437880	
		Thiamethoxam	0.0020	U	ug/L	P437880	
		Tolfenpyrad	0.0020	U	ug/L	P437880	
		Triclopyr	0.0040	U	ug/L	P437880	

Ref. Method and Comment:
EPA 8321B: The matrix spike and LCS recoveries for afidopyropen could not be evaluated due to laboratory technical difficulties.

Sample Location: FB **Collection Date/Time: 11/14/2023 10:35**

Field ID: FB_11142023 Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2451489	DEP SOP: NU-094-1	Color (true)	2.5	U	PCU	P437806	
	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P437851	
	EPA 300.0 Rev. 2.1	Sulfate	0.20	U	mg SO4/L	P438152	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P438013	
	SM 2540 C-2015	TDS	15	U	mg/L	P438247	
	SM 2540 D-2015	TSS	2	U	mg/L	P438201	
	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P438017	
2451490	SM 5310 B-2011 dissolved	Organic Carbon	0.50	U	mg C/L	P437964	
2451491	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P438243	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P438033	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P438095	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P438117	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P437963	
2451492	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P437832	
2451517	EPA 8321B	2,4-D	0.0020	U	ug/L	P437880	
		Acesulfame K	0.10	U	ug/L	P437799	
		2,4,5-T	0.0040	U	ug/L	P437880	
		AMPA	0.10	U	ug/L	P437799	
		Acetaminophen	0.0080	U	ug/L	P437880	
		Acetamiprid	0.0020	U	ug/L	P437880	
		Endothall	0.25	U	ug/L	P437799	
		Glufosinate	0.10	U	ug/L	P437799	
		Glyphosate	0.10	U	ug/L	P437799	
		Afidopyropen	0.0020	U	ug/L	P437880	
		Sucralose	0.010	U	ug/L	P437799	
		Bentazon	8.0E-04	U	ug/L	P437880	MS
		Benzovindiflupyr	0.0020	U	ug/L	P437880	
		Carbamazepine	8.0E-04	U	ug/L	P437880	
		Clothianidin	0.0020	U	ug/L	P437880	
		Dinotefuran	0.0020	U	ug/L	P437880	
		Diuron	0.0020	U	ug/L	P437880	
		Fenuron	0.032	U	ug/L	P437880	
		Fluridone	8.0E-04	U	ug/L	P437880	
		Imazapyr	0.0040	U	ug/L	P437880	
		Hydrocodone	0.0020	U	ug/L	P437880	
		Ibuprofen	0.080	U	ug/L	P437880	
		Imidacloprid	0.0020	U	ug/L	P437880	
		Linuron	0.0040	U	ug/L	P437880	
		Mandestrobin	0.0020	U	ug/L	P437880	
		MCPP	0.0020	U	ug/L	P437880	
		Naproxen	0.0080	U	ug/L	P437880	
		Primidone	0.0040	U	ug/L	P437880	
		Pyraclostrobin	0.0020	U	ug/L	P437880	

Field ID: FB_11142023 Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2451517	EPA 8321B	Silvex	0.0040	U	ug/L	P437880	
		Thiamethoxam	0.0020	U	ug/L	P437880	
		Tolfenpyrad	0.0020	U	ug/L	P437880	
		Triclopyr	0.0040	U	ug/L	P437880	

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: The matrix spike and LCS recoveries for afidopyropen could not be evaluated due to laboratory technical difficulties.

Sample Location: TELEGRAPH CREEK SONDE AT USGS SONDE STATION **Collection Date/Time: 11/14/2023 11:15**

Field ID: G3SD0129 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2451476	DEP SOP: NU-094-1	Color (true)	330		PCU	P437806	
	EPA 180.1 Rev. 2.0	Turbidity	6.8		NTU	P437851	
	EPA 300.0 Rev. 2.1	Chloride	49		mg Cl/L	P438148	
		Sulfate	2.3		mg SO4/L	P438152	
	SM 2320 B-2011	Total Alkalinity	107		mg CaCO3/L	P438013	
	SM 2540 C-2015	TDS	288	A	mg/L	P438248	
	SM 2540 D-2015	TSS	15	A	mg/L	P438202	
	SM 4500-F- C-2011	Fluoride	0.093	I	mg F/L	P438017	
2451480	SM 5310 B-2011 dissolved	Organic Carbon	39		mg C/L	P437964	
2451484	EPA 350.1 Rev. 2.0	Ammonia-N	0.069		mg N/L	P438243	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.9		mg N/L	P438033	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.078		mg N/L	P438103	
	EPA 365.1 Rev. 2.0	Total-P	0.065		mg P/L	P438117	
	SM 5310 B-2011	Organic Carbon	39		mg C/L	P437963	
2451488	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.026		mg P/L	P437832	

Quality Assurance Report
Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P437806

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P437851

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438148

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438152

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438242

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438243

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438033

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438095

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438103

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438116

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438117

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P437832

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

Reference Method: EPA 8321B
Batch ID: P437799

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: P437880

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P437880

Component	Result	Code	Units
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: P438013

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

Reference Method: SM 2320 B-2011
Batch ID: P438014

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

Reference Method: SM 2540 C-2015
Batch ID: P438247

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2015
Batch ID: P438248

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P438201

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P438202

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P438017

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P438018

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P437963

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

Reference Method: SM 5310 B-2011 dissolved
Batch ID: P437964

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: P437806

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.9		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P437851

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438148

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438152

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438242

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	94.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438243

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	93.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438033

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438095

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438103

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438116

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438117

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P437832

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

Reference Method: EPA 8321B
Batch ID: P437799

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	109		P	40 - 150
AMPA	104		P	40 - 160
Endothall	108		P	40 - 160
Glufosinate	100		P	40 - 160
Glyphosate	101		P	40 - 160
Sucralose	99.0		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P437880

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	105		P	40 - 150
2,4,5-T	91.0		P	40 - 150
Acetaminophen	95.2		P	30 - 150
Acetamiprid	95.8		P	40 - 150
Bentazon	66.4		P	30 - 150
Benzovindiflupyr	92.8		P	40 - 150
Carbamazepine	76.6		P	40 - 150
Clothianidin	97.7		P	40 - 150
Dinotefuran	99.6		P	40 - 150
Diuron	70.8		P	40 - 150
Fenuron	93.2		P	40 - 150
Fluridone	88.6		P	40 - 150
Hydrocodone	112		P	40 - 150
Ibuprofen	65.0		P	40 - 150
Imazapyr	91.6		P	40 - 150
Imidacloprid	94.8		P	40 - 150
Linuron	76.6		P	40 - 150
Mandestrobin	101		P	40 - 150
MCPP	96.4		P	40 - 150
Naproxen	60.7		P	40 - 150
Primidone	92.3		P	40 - 150
Pyraclostrobin	93.9		P	40 - 150
Silvex	87.1		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P437880

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Thiamethoxam	93.1		P	40 - 150
Tolfenpyrad	62.6		P	30 - 150
Triclopyr	105		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P438013

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.6		P	92 - 105

Reference Method: SM 2320 B-2011
Batch ID: P438014

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P438247

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	93.2		P	85 - 115

Reference Method: SM 2540 C-2015
Batch ID: P438248

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	105		P	85 - 115

Reference Method: SM 2540 D-2015
Batch ID: P438201

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	109		P	85 - 115

Reference Method: SM 2540 D-2015
Batch ID: P438202

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	111		P	85 - 115

Reference Method: SM 4500-F- C-2011
Batch ID: P438017

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

Reference Method: SM 4500-F- C-2011
Batch ID: P438018

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	94 - 106

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P437963

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

Reference Method: SM 5310 B-2011 dissolved
Batch ID: P437964

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.8		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438148

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451475	Chloride	98.6		P	90 - 110
2451570	Chloride	99.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438152

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451475	Sulfate	97.7		P	90 - 110
2451570	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438242

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451413	Ammonia-N	99.8	98.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438243

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451539	Ammonia-N	100	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438033

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451566	Kjeldahl Nitrogen	97.0	99.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438095

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2450900	NO2NO3-N	97.5	98.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438103

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451413	NO2NO3-N	98.8	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438116

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451435	Total-P	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438117

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451573	Total-P	106	108	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P437832

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451485	O-Phosphate-P	97.5	96.0	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P437799

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451421	Acesulfame K	121	124	P/P	40 - 150
2451421	AMPA	97.9	97.4	P/P	40 - 160
2451421	Endothall	108	102	P/P	40 - 160
2451421	Glufosinate	98.7	99.3	P/P	40 - 160
2451421	Glyphosate	101	93.1	P/P	40 - 160
2451421	Sucralose	94.0	95.6	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P437880

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451421	2,4-D	89.5	103	P/P	40 - 150
2451421	2,4,5-T	84.6	89.0	P/P	40 - 150
2451421	Acetaminophen	108	106	P/P	30 - 150
2451421	Acetamiprid	44.1	41.6	P/P	40 - 150
2451421	Bentazon	23.3	24.0	F/F	30 - 150
2451421	Benzovindiflupyr	79.4	84.4	P/P	40 - 150
2451421	Carbamazepine	56.7	58.3	P/P	40 - 150
2451421	Clothianidin	76.0	81.0	P/P	40 - 150
2451421	Dinotefuran	67.7	70.7	P/P	40 - 150
2451421	Diuron	54.3	56.2	P/P	40 - 150
2451421	Fenuron	50.7	52.3	P/P	40 - 150
2451421	Fluridone	65.6	70.7	P/P	40 - 150
2451421	Hydrocodone	73.0	78.8	P/P	40 - 150
2451421	Ibuprofen	53.8	54.7	P/P	40 - 150
2451421	Imazapyr	87.4	90.6	P/P	40 - 150
2451421	Imidacloprid	101	106	P/P	40 - 150
2451421	Linuron	63.1	62.4	P/P	40 - 150
2451421	Mandestrobin	83.0	84.7	P/P	40 - 150
2451421	MCPP	83.5	90.4	P/P	40 - 150
2451421	Naproxen	79.7	70.7	P/P	40 - 150
2451421	Primidone	76.2	73.7	P/P	40 - 150
2451421	Pyraclostrobin	84.6	90.3	P/P	40 - 150
2451421	Silvex	88.6	90.1	P/P	40 - 150
2451421	Thiamethoxam	77.0	82.2	P/P	40 - 150
2451421	Tolfenpyrad	52.9	54.2	P/P	30 - 150
2451421	Triclopyr	82.5	87.2	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P438017

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2450964	Fluoride	101	101	P/P	94 - 106

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P438018

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451614	Fluoride	102	102	P/P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P437963

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451413	Organic Carbon	97.5	99.9	P/P	85 - 115

Reference Method: SM 5310 B-2011 dissolved
Batch ID: P437964

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451477	Organic Carbon	95.1	94.0	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P437806

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451474	Color (true)	0.142	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P437851

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451366	Turbidity	0.539	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438148

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451475	Chloride	0.716	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438152

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451475	Sulfate	1.00	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438242

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451413	Ammonia-N	0.799	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438243

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451539	Ammonia-N	0.743	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438033

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451566	Kjeldahl Nitrogen	2.05	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438095

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2450900	NO2NO3-N	0.512	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438103

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451413	NO2NO3-N	1.18	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438116

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451435	Total-P	0.139	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438117

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451573	Total-P	2.18	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P437832

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451485	O-Phosphate-P	1.39	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P437799

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451421	Acesulfame K	1.98	Spike	P	0 - 30
2451421	AMPA	0.489	Spike	P	0 - 30
2451421	Endothall	5.95	Spike	P	0 - 30
2451421	Glufosinate	0.549	Spike	P	0 - 30
2451421	Glyphosate	7.98	Spike	P	0 - 30
2451421	Sucralose	1.26	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P437880

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451421	2,4-D	13.8	Spike	P	0 - 30
2451421	2,4,5-T	5.15	Spike	P	0 - 30
2451421	Acetaminophen	2.31	Spike	P	0 - 30
2451421	Acetamiprid	5.73	Spike	P	0 - 30
2451421	Bentazon	2.98	Spike	P	0 - 30
2451421	Benzovindiflupyr	6.13	Spike	P	0 - 30
2451421	Carbamazepine	2.70	Spike	P	0 - 30
2451421	Clothianidin	6.39	Spike	P	0 - 30
2451421	Dinotefuran	4.43	Spike	P	0 - 30
2451421	Diuron	3.43	Spike	P	0 - 30
2451421	Fenuron	3.13	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P437880

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451421	Fluridone	7.45	Spike	P	0 - 30
2451421	Hydrocodone	7.64	Spike	P	0 - 30
2451421	Ibuprofen	1.77	Spike	P	0 - 30
2451421	Imazapyr	3.10	Spike	P	0 - 30
2451421	Imidacloprid	4.86	Spike	P	0 - 30
2451421	Linuron	1.04	Spike	P	0 - 30
2451421	Mandestrobin	2.10	Spike	P	0 - 30
2451421	MCPP	7.95	Spike	P	0 - 30
2451421	Naproxen	11.9	Spike	P	0 - 30
2451421	Primidone	3.35	Spike	P	0 - 30
2451421	Pyraclostrobin	6.58	Spike	P	0 - 30
2451421	Silvex	1.73	Spike	P	0 - 30
2451421	Thiamethoxam	6.55	Spike	P	0 - 30
2451421	Tolfenpyrad	2.43	Spike	P	0 - 30
2451421	Triclopyr	5.52	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P438013

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2450964	Total Alkalinity	1.18	Sample	P	0 - 3.9

Reference Method: SM 2320 B-2011
Batch ID: P438014

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451614	Total Alkalinity	1.72	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P438247

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2450787	TDS	3.75	Sample	P	0 - 10

Reference Method: SM 2540 C-2015
Batch ID: P438248

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451476	TDS	9.72	Sample	P	0 - 10

Reference Method: SM 2540 D-2015
Batch ID: P438202

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451476	TSS	5.41	Sample	P	0 - 10

Quality Assurance Report
Precision

Reference Method: SM 4500-F- C-2011
Batch ID: P438017

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2450964	Fluoride	0.0	Spike	P	0 - 1.9

Reference Method: SM 4500-F- C-2011
Batch ID: P438018

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451614	Fluoride	0.484	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P437963

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451413	Organic Carbon	1.68	Spike	P	0 - 20

Reference Method: SM 5310 B-2011 dissolved
Batch ID: P437964

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451477	Organic Carbon	0.791	Spike	P	0 - 20

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2451517
Field Sample ID: FB_11142023

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	82.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	81.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	73.1	P	30 - 160
EPA 8321B	Diuron-d6	72.4	P	30 - 160
EPA 8321B	Endothall-d6	95.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	101	P	30 - 160
EPA 8321B	Ibuprofen-d3	56.4	P	30 - 160
EPA 8321B	Primidone-d5	71.7	P	30 - 160
EPA 8321B	Sucralose-d6	93.5	P	30 - 160

Lab Sample ID: 2451518
Field Sample ID: G3SD0085

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	76.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	74.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	46.1	P	30 - 160
EPA 8321B	Diuron-d6	40.4	P	30 - 160
EPA 8321B	Endothall-d6	110	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	93.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	64.0	P	30 - 160
EPA 8321B	Primidone-d5	41.9	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160

Quality Assurance Report
Calibration Verification

Reference Method: DEP SOP: NU-094-1
Run ID: A122732
Included Lab Sample IDs: 2451473, 2451474, 2451489

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A122740
Included Lab Sample IDs: 2451485, 2451486, 2451487, 2451488, 2451492, 2451496

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	101	97.2	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1
Run ID: A122745
Included Lab Sample IDs: 2451475, 2451476, 2451493

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.9	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A122747
Included Lab Sample IDs: 2451473, 2451474, 2451475, 2451476, 2451489, 2451493

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

Reference Method: SM 5310 B-2011
Run ID: A122791
Included Lab Sample IDs: 2451481, 2451482, 2451483, 2451484, 2451491, 2451495

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.4	95.4	P/P	90 - 110

Reference Method: SM 5310 B-2011 dissolved
Run ID: A122792
Included Lab Sample IDs: 2451477, 2451478, 2451479, 2451480, 2451490, 2451494

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.4	96.3	P/P	90 - 110
Organic Carbon	96.3	97.1	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A122799
Included Lab Sample IDs: 2451517, 2451518

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	98.3	97.8	P/P	60 - 160
Endothall	94.6	110	P/P	60 - 160
Glufosinate	95.2	101	P/P	60 - 160
Glyphosate	99.3	98.4	P/P	60 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A122812
Included Lab Sample IDs: 2451517, 2451518

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	107	122	P/P	60 - 160
Sucralose	96.3	106	P/P	60 - 160

Reference Method: SM 2320 B-2011
Run ID: A122815
Included Lab Sample IDs: 2451473, 2451474, 2451475, 2451476, 2451489, 2451493

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.7	97.8	P/P	90 - 110
Total Alkalinity	97.2	95.7	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A122815
Included Lab Sample IDs: 2451473, 2451474, 2451475, 2451476, 2451489, 2451493

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A122849
Included Lab Sample IDs: 2451481, 2451482, 2451483, 2451484, 2451491, 2451495

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	102	P/P	90 - 110
NO2NO3-N	99.0	100	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A122874
Included Lab Sample IDs: 2451473, 2451474, 2451475, 2451476, 2451493

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	104	105	P/P	90 - 110
Sulfate	103	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A122886
Included Lab Sample IDs: 2451483, 2451484, 2451495

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.7	101	P/P	90 - 110
Total-P	99.1	97.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A122887
Included Lab Sample IDs: 2451481, 2451482, 2451491

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.2	101	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A122892
Included Lab Sample IDs: 2451481, 2451482, 2451483, 2451484, 2451491, 2451495

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.4	95.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A122914
Included Lab Sample IDs: 2451481, 2451482, 2451483, 2451484, 2451491, 2451495

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

Reference Method: EPA 8321B
Run ID: A122934
Included Lab Sample IDs: 2451517, 2451518

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	92.5	97.9	P/P	50 - 150
2,4,5-T	103	109	P/P	50 - 150
Acetaminophen	110	111	P/P	60 - 160
Acetamiprid	108	109	P/P	50 - 150
Afidopyropen	96.0	96.9	P/P	50 - 150
Bentazon	99.9	97.8	P/P	50 - 160
Benzovindiflupyr	102	105	P/P	50 - 150
Carbamazepine	111	110	P/P	60 - 150
Clothianidin	106	104	P/P	60 - 150
Dinotefuran	105	108	P/P	50 - 150
Diuron	118	117	P/P	60 - 160
Fenuron	105	105	P/P	60 - 150
Fluridone	104	108	P/P	60 - 160
Hydrocodone	114	112	P/P	60 - 150
Ibuprofen	90.4	84.5	P/P	50 - 160
Imazapyr	96.0	88.0	P/P	50 - 150
Imidacloprid	94.6	96.5	P/P	60 - 150
Linuron	100	101	P/P	60 - 150
Mandestrobin	111	106	P/P	50 - 150
MCPP	106	107	P/P	50 - 150
Naproxen	75.7	85.2	P/P	50 - 160
Primidone	100	97.3	P/P	60 - 150
Pyraclostrobin	117	117	P/P	60 - 150
Silvex	90.4	102	P/P	50 - 150
Thiamethoxam	105	108	P/P	50 - 150
Tolfenpyrad	96.9	101	P/P	60 - 150
Triclopyr	102	104	P/P	50 - 150

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
DEP SOP: NU-094-1	Color (true)	98.9				0.142	
EPA 180.1 Rev. 2.0	Turbidity	103				0.539	
EPA 300.0 Rev. 2.1	Chloride	103	98.6	99.9		0.716	
	Sulfate	102	97.7	101		1.00	
EPA 350.1 Rev. 2.0	Ammonia-N	94.4	99.8	98.8			0.799
	Ammonia-N	93.6	100	98.8			0.743
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	97.0	99.6			2.05
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	97.5	98.0			0.512
	NO2NO3-N	101	98.8	100			1.18
EPA 365.1 Rev. 2.0	Total-P	103	104	104			0.139
	Total-P	103	106	108			2.18
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100	97.5	96.0			1.39
EPA 8321B	2,4-D	105	89.5	103			13.8
	2,4,5-T	91.0	84.6	89.0			5.15
	Acesulfame K	109	121	124			1.98
	Acetaminophen	95.2	106	108			2.31
	Acetamiprid	95.8	44.1	41.6			5.73
	AMPA	104	97.9	97.4			0.489
	Bentazon	66.4	23.3	24.0			2.98
	Benzovindiflupyr	92.8	79.4	84.4			6.13
	Carbamazepine	76.6	56.7	58.3			2.70
	Clothianidin	97.7	76.0	81.0			6.39
	Dinotefuran	99.6	67.7	70.7			4.43
	Diuron	70.8	54.3	56.2			3.43
	Endothall	108	108	102			5.95
	Fenuron	93.2	50.7	52.3			3.13
	Fluridone	88.6	65.6	70.7			7.45
	Glufosinate	100	98.7	99.3			0.549
	Glyphosate	101	101	93.1			7.98
	Hydrocodone	112	73.0	78.8			7.64
	Ibuprofen	65.0	53.8	54.7			1.77
	Imazapyr	91.6	87.4	90.6			3.10
	Imidacloprid	94.8	101	106			4.86
	Linuron	76.6	63.1	62.4			1.04
	Mandestrobin	101	83.0	84.7			2.10
	MCPP	96.4	83.5	90.4			7.95
	Naproxen	60.7	79.7	70.7			11.9
	Primidone	92.3	76.2	73.7			3.35
	Pyraclostrobin	93.9	84.6	90.3			6.58
	Silvex	87.1	88.6	90.1			1.73
	Sucralose	99.0	94.0	95.6			1.26
	Thiamethoxam	93.1	77.0	82.2			6.55
	Tolfenpyrad	62.6	52.9	54.2			2.43
	Triclopyr	105	82.5	87.2			5.52
SM 2320 B-2011	Total Alkalinity	97.6				1.18	
	Total Alkalinity	100				1.72	
SM 2540 C-2015	TDS	93.2				3.75	
	TDS	105				9.72	
SM 2540 D-2015	TSS	109					
	TSS	111				5.41	
SM 4500-F- C-2011	Fluoride	101	101	101			0.0
	Fluoride	102	102	102			0.484
SM 5310 B-2011	Organic Carbon	96.6	97.5	99.9			1.68
SM 5310 B-2011 dissolved	Organic Carbon	95.8	95.1	94.0			0.791

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2451473, 2451474, 2451475, 2451476, 2451489, 2451493
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2451473, 2451474, 2451475, 2451476, 2451489, 2451493
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2451473, 2451474, 2451475, 2451476, 2451493
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2451473, 2451474, 2451475, 2451476, 2451489, 2451493
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2451481, 2451482, 2451483, 2451484, 2451491, 2451495
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2451481, 2451482, 2451483, 2451484, 2451491, 2451495
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2451481, 2451482, 2451483, 2451484, 2451491, 2451495
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2451481, 2451482, 2451483, 2451484, 2451491, 2451495
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2451485, 2451486, 2451487, 2451488, 2451492, 2451496
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2451517, 2451518
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2451473, 2451474, 2451475, 2451476, 2451489, 2451493
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2451473, 2451474, 2451475, 2451476, 2451489, 2451493
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2451473, 2451474, 2451475, 2451476, 2451489, 2451493
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2451473, 2451474, 2451475, 2451476, 2451489, 2451493
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2451481, 2451482, 2451483, 2451484, 2451491, 2451495
SM 5310 B-2011 dissolved	Dissolved Nonpurgeable Organic Carbon in filtered, aqueous matrices	2451477, 2451478, 2451479, 2451480, 2451490, 2451494

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	11/15/2023			11/15/2023 13:08	Samantha L Bates	2451473
	11/15/2023			11/15/2023 13:09	Samantha L Bates	2451474
	11/15/2023			11/15/2023 13:11	Samantha L Bates	2451489
	11/15/2023			11/15/2023 14:41	Samantha L Bates	2451475, 2451476
	11/15/2023			11/15/2023 14:42	Samantha L Bates	2451493
EPA 180.1 Rev. 2.0	11/15/2023			11/15/2023 13:25	Khloe J Berg	2451473, 2451474
	11/15/2023			11/15/2023 13:26	Khloe J Berg	2451475
	11/15/2023			11/15/2023 13:27	Khloe J Berg	2451476, 2451489
	11/15/2023			11/15/2023 13:28	Khloe J Berg	2451493
EPA 300.0 Rev. 2.1	11/15/2023			11/22/2023 08:08	James L Waggerby	2451475
	11/15/2023			11/22/2023 09:23	James L Waggerby	2451473
	11/15/2023			11/22/2023 09:38	James L Waggerby	2451474
	11/15/2023			11/22/2023 09:53	James L Waggerby	2451476
	11/15/2023			11/22/2023 10:09	James L Waggerby	2451489
	11/15/2023			11/22/2023 10:24	James L Waggerby	2451493
EPA 350.1 Rev. 2.0	11/15/2023			11/28/2023 13:43	Khloe J Berg	2451481
	11/15/2023			11/28/2023 13:55	Khloe J Berg	2451482
	11/15/2023			11/28/2023 13:59	Khloe J Berg	2451483
	11/15/2023			11/28/2023 14:01	Khloe J Berg	2451484
	11/15/2023			11/28/2023 14:02	Khloe J Berg	2451491
	11/15/2023			11/28/2023 14:03	Khloe J Berg	2451495
EPA 351.2 Rev. 2.0	11/15/2023	11/20/2023 21:15	Simonne.V. Calhoun	11/27/2023 13:55	Ping Hua	2451481
	11/15/2023	11/20/2023 21:15	Simonne.V. Calhoun	11/27/2023 13:56	Ping Hua	2451482
	11/15/2023	11/20/2023 21:15	Simonne.V. Calhoun	11/27/2023 13:58	Ping Hua	2451483
	11/15/2023	11/20/2023 21:15	Simonne.V. Calhoun	11/27/2023 14:00	Ping Hua	2451484
	11/15/2023	11/20/2023 21:15	Simonne.V. Calhoun	11/27/2023 14:01	Ping Hua	2451491
	11/15/2023	11/20/2023 21:15	Simonne.V. Calhoun	11/27/2023 14:03	Ping Hua	2451495
EPA 353.2 Rev. 2.0	11/15/2023			11/20/2023 11:41	Anna M. Plaviak	2451491
	11/15/2023			11/20/2023 11:42	Anna M. Plaviak	2451495
	11/15/2023			11/20/2023 15:19	Anna M. Plaviak	2451481
	11/15/2023			11/20/2023 15:20	Anna M. Plaviak	2451482
	11/15/2023			11/20/2023 15:21	Anna M. Plaviak	2451483
	11/15/2023			11/20/2023 15:22	Anna M. Plaviak	2451484
EPA 365.1 Rev. 2.0	11/15/2023	11/21/2023 12:58	Adam P Silver	11/27/2023 10:56	Chandler E Cox	2451483
	11/15/2023	11/21/2023 12:58	Adam P Silver	11/27/2023 11:03	Chandler E Cox	2451484
	11/15/2023	11/21/2023 12:58	Adam P Silver	11/27/2023 11:04	Chandler E Cox	2451495
	11/15/2023	11/21/2023 12:58	Adam P Silver	11/27/2023 11:49	Chandler E Cox	2451481
	11/15/2023	11/21/2023 12:58	Adam P Silver	11/27/2023 11:50	Chandler E Cox	2451482
	11/15/2023	11/21/2023 12:58	Adam P Silver	11/27/2023 11:52	Chandler E Cox	2451491
EPA 365.1 Rev. 2.0 dissolved	11/15/2023			11/15/2023 13:44	Chandler E Cox	2451485

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 dissolved	11/15/2023			11/15/2023 13:47	Chandler E Cox	2451486
	11/15/2023			11/15/2023 13:48	Chandler E Cox	2451487, 2451488
	11/15/2023			11/15/2023 13:49	Chandler E Cox	2451492
	11/15/2023			11/15/2023 13:50	Chandler E Cox	2451496
EPA 8321B	11/15/2023	11/16/2023 12:00	Tae K Lee	11/16/2023 14:35	Hana Lee	2451517
	11/15/2023	11/16/2023 12:00	Tae K Lee	11/16/2023 14:48	Hana Lee	2451518
	11/15/2023	11/16/2023 12:00	Tae K Lee	11/17/2023 01:29	Hana Lee	2451517
	11/15/2023	11/16/2023 12:00	Tae K Lee	11/17/2023 01:43	Hana Lee	2451518
	11/15/2023	11/20/2023 09:00	Hoor Shaik	11/28/2023 16:11	Juyoung Kim	2451517
	11/15/2023	11/20/2023 09:00	Hoor Shaik	11/28/2023 16:29	Juyoung Kim	2451518
SM 2320 B-2011	11/15/2023			11/18/2023 09:22	Adam P Silver	2451473
	11/15/2023			11/18/2023 09:37	Adam P Silver	2451474
	11/15/2023			11/18/2023 09:50	Adam P Silver	2451475
	11/15/2023			11/18/2023 10:04	Adam P Silver	2451476
	11/15/2023			11/18/2023 10:14	Adam P Silver	2451489
	11/15/2023			11/18/2023 12:39	Adam P Silver	2451493
SM 2540 C-2015	11/15/2023			11/16/2023 15:42	Yijie Li	2451473, 2451474, 2451475, 2451476, 2451489, 2451493
SM 2540 D-2015	11/15/2023			11/16/2023 15:42	Yijie Li	2451473, 2451474, 2451475, 2451476, 2451489, 2451493
SM 4500-F- C-2011	11/15/2023			11/18/2023 09:22	Adam P Silver	2451473
	11/15/2023			11/18/2023 09:37	Adam P Silver	2451474
	11/15/2023			11/18/2023 09:50	Adam P Silver	2451475
	11/15/2023			11/18/2023 10:04	Adam P Silver	2451476
	11/15/2023			11/18/2023 10:14	Adam P Silver	2451489
	11/15/2023			11/18/2023 12:39	Adam P Silver	2451493
SM 5310 B-2011	11/15/2023			11/16/2023 22:21	Khloe J Berg	2451481
	11/15/2023			11/16/2023 22:34	Khloe J Berg	2451482
	11/15/2023			11/16/2023 22:48	Khloe J Berg	2451483
	11/15/2023			11/16/2023 23:02	Khloe J Berg	2451484
	11/15/2023			11/16/2023 23:15	Khloe J Berg	2451491
	11/15/2023			11/16/2023 23:29	Khloe J Berg	2451495
SM 5310 B-2011 dissolved	11/15/2023			11/16/2023 18:51	Khloe J Berg	2451477
	11/15/2023			11/16/2023 19:47	Khloe J Berg	2451478
	11/15/2023			11/16/2023 21:57	Khloe J Berg	2451479
	11/15/2023			11/16/2023 22:11	Khloe J Berg	2451480
	11/15/2023			11/16/2023 22:25	Khloe J Berg	2451490
	11/15/2023			11/16/2023 22:42	Khloe J Berg	2451494