

Chemical Analysis Report

NW-DIST-2017-04-11-02

Florida Department of Environmental Protection
Central Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **ENR D WBID 548GB 738**

Request ID: **RQ-2017-04-10-30**

Customer: **NW-DIST**

Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 208A
Pensacola, FL 32502-5794
Attn: Michael King

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

Date Certified: 08-MAY-2017 16:00

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light gray rectangular background.

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical groups are included in this report: 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 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: TEXAR BAYOU

Collection Date/Time: 04/10/2017 11:15

Field ID: G4NW0402

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887370	EPA 180.1 Rev. 2.0	Turbidity	1.8	A	NTU	P323151	
	SM 2320 B-97	Total Alkalinity	50		mg CaCO3/L	P323535	
	SM 2540 D-97	TSS	5	I	mg/L	P323902	
	SM 4500 F-C-97	Fluoride	0.53		mg F/L	P323537	
1887373	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P323129	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.28	I	mg N/L	P323212	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.18		mg N/L	P323568	
	EPA 365.1 Rev. 2.0	Total-P	0.010		mg P/L	P323257	
	SM 5310 B-00	Organic Carbon	3.1		mg C/L	P323331	
1887376	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P323110	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: TEXAR BAYOU

Collection Date/Time: 04/10/2017 11:55

Field ID: G4NW0402DUPLICATE

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887371	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P323151	
	SM 2320 B-97	Total Alkalinity	50	A	mg CaCO3/L	P323535	
	SM 2540 D-97	TSS	4	I	mg/L	P323902	
	SM 4500 F-C-97	Fluoride	0.55		mg F/L	P323537	
1887374	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P323129	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.27	I	mg N/L	P323212	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.17		mg N/L	P323568	
	EPA 365.1 Rev. 2.0	Total-P	0.009	I	mg P/L	P323257	
	SM 5310 B-00	Organic Carbon	3.2		mg C/L	P323331	
1887377	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P323110	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: TEXAR BAYOU

Collection Date/Time: 04/10/2017 11:30

Field ID: FIELDBLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887372	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P323151	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P323886	
	SM 2540 D-97	TSS	2	U	mg/L	P323888	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P324679	
1887375	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P323135	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P323288	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P323319	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P323302	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P323329	
1887378	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P323109	

Field ID: FIELDBLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
Ref. Method and Comment: SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.							

Sample Location: TEXAR BAYOU

Collection Date/Time: 04/10/2017 11:15

Field ID: G4NW0402

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887660	EPA 8321B	Sucralose**	0.032	I	ug/L	P323139	MS
	USGS O-2060-01	2,4-D	0.013	I	ug/L	P323095	
		Diuron	0.0040	U	ug/L	P323095	
		Fenuron	0.0080	U	ug/L	P323095	
		Imidacloprid	0.0040	U	ug/L	P323095	
		Bentazon	0.060		ug/L	P323095	
		Linuron	0.0040	U	ug/L	P323095	
		Acetaminophen**	0.010	U	ug/L	P323095	
		MCP	0.0040	U	ug/L	P323095	
		Carbamazepine**	4.4E-04	I	ug/L	P323095	
		Triclopyr**	0.010	U	ug/L	P323095	
		Primidone**	0.0080	U	ug/L	P323095	
		Fluridone**	4.0E-04	U	ug/L	P323095	

Ref. Method and Comment:
 USGS O-2060-01: MS accuracy for bentazon could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: TEXAR BAYOU

Collection Date/Time: 04/10/2017 11:55

Field ID: G4NW0402DUPLICATE

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887661	EPA 8321B	Sucralose**	0.047		ug/L	P323139	MS
	USGS O-2060-01	2,4-D	0.013	I	ug/L	P323095	
		Diuron	0.0040	U	ug/L	P323095	
		Fenuron	0.0080	U	ug/L	P323095	
		Imidacloprid	0.0040	U	ug/L	P323095	
		Bentazon	0.061		ug/L	P323095	
		Linuron	0.0040	U	ug/L	P323095	
		Acetaminophen**	0.010	U	ug/L	P323095	
		MCP	0.0040	U	ug/L	P323095	
		Carbamazepine**	4.9E-04	I	ug/L	P323095	
		Triclopyr**	0.010	U	ug/L	P323095	
		Primidone**	0.0080	U	ug/L	P323095	
		Fluridone**	4.0E-04	U	ug/L	P323095	

Ref. Method and Comment:
 USGS O-2060-01: MS accuracy for bentazon could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Texar Bayou

Collection Date/Time: 04/10/2017 11:30

Field ID: FIELDBLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887662	EPA 8321B	Sucralose**	0.010	U	ug/L	P323139	

Field ID: FIELDBLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887662	USGS O-2060-01	2,4-D	0.0040	U	ug/L	P323095	
		Diuron	0.0040	U	ug/L	P323095	
		Fenuron	0.0080	U	ug/L	P323095	MS
		Imidacloprid	0.0040	U	ug/L	P323095	
		Bentazon	0.0040	U	ug/L	P323095	
		Linuron	0.0040	U	ug/L	P323095	
		Acetaminophen**	0.010	U	ug/L	P323095	
		MCP	0.0040	U	ug/L	P323095	
		Carbamazepine**	4.0E-04	U	ug/L	P323095	
		Triclopyr**	0.010	U	ug/L	P323095	
		Primidone**	0.0080	U	ug/L	P323095	
		Fluridone**	4.0E-04	U	ug/L	P323095	

Ref. Method and Comment:

USGS O-2060-01: MS accuracy for bentazon could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: BLACKWATER BAY SOUTH SECTION

Collection Date/Time: 04/10/2017 14:00

Field ID: G4NW0401

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887663	EPA 8321B	Sucralose**	0.014	I	ug/L	P323139	
	USGS O-2060-01	2,4-D	0.0059	I	ug/L	P323095	
		Diuron	0.0040	U	ug/L	P323095	
		Fenuron	0.0080	U	ug/L	P323095	MS
		Imidacloprid	0.0040	U	ug/L	P323095	
		Bentazon	0.058		ug/L	P323095	
		Linuron	0.0040	U	ug/L	P323095	
		Acetaminophen**	0.010	U	ug/L	P323095	
		MCP	0.0040	U	ug/L	P323095	
		Carbamazepine**	4.0E-04	U	ug/L	P323095	
		Triclopyr**	0.010	U	ug/L	P323095	
		Primidone**	0.0080	U	ug/L	P323095	
		Fluridone**	4.0E-04	U	ug/L	P323095	

Ref. Method and Comment:

USGS O-2060-01: MS accuracy for bentazon could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: BLACKWATER BAY SOUTH SECTION

Collection Date/Time: 04/10/2017 14:00

Field ID: G4NW0401

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887653	EPA 180.1 Rev. 2.0	Turbidity	2.4		NTU	P323264	
	SM 2320 B-97	Total Alkalinity	34		mg CaCO3/L	P323535	
	SM 2540 D-97	TSS	3	IA	mg/L	P323891	
	SM 4500 F-C-97	Fluoride	0.28		mg F/L	P323537	
1887654	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P323272	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.33	I	mg N/L	P323500	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.009	I	mg N/L	P323568	
	EPA 365.1 Rev. 2.0	Total-P	0.013		mg P/L	P323426	

Field ID: G4NW0401

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887654	SM 5310 B-00	Organic Carbon	4.8		mg C/L	P323368	
1887655	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P323293	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P323151

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P323264

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P323129

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

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P323135

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

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P323272

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P323212

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P323288

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P323500

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323319

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323568

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323257

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323302

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323426

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323109

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323110

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323293

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

Reference Method: EPA 8321B
Batch ID: P323139

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P323535

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

Reference Method: SM 2320 B-97
Batch ID: P323886

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

Reference Method: SM 2540 D-97
Batch ID: P323888

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P323891

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P323902

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P323537

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P324679

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P323329

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

Reference Method: SM 5310 B-00
Batch ID: P323331

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

Quality Assurance Report Method Blank Results

Reference Method: SM 5310 B-00
 Batch ID: P323368

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

Reference Method: USGS O-2060-01
 Batch ID: P323095

Component	Result	Code	Units
2,4-D	0.0040	U	ug/L
Acetaminophen	0.010	U	ug/L
Bentazon	0.0040	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	0.0040	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	0.0040	U	ug/L
Linuron	0.0040	U	ug/L
MCP	0.0040	U	ug/L
Primidone	0.0080	U	ug/L
Triclopyr	0.010	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P323129

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

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P323135

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

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P323272

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P323212

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P323288

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323500

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323319

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	98.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323568

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323257

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: P323302

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323426

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323109

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323110

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.9		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323293

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.0		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P323139

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	104		P	40 - 140

Reference Method: SM 2320 B-97
Batch ID: P323535

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	95 - 108

Reference Method: SM 2320 B-97
Batch ID: P323886

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P323537

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.0		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P324679

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.1		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P323329

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	101		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P323331

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	101		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P323368

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	104		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P323095

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	85.6		P	40 - 140
Acetaminophen	110		P	40 - 140
Bentazon	106		P	40 - 140
Carbamazepine	99.6		P	40 - 140

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01
Batch ID: P323095

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Diuron	80.8		P	40 - 140
Fenuron	96.4		P	40 - 140
Fluridone	90.4		P	40 - 140
Imidacloprid	78.0		P	40 - 160
Linuron	67.2		P	40 - 140
MCPP	100		P	40 - 140
Primidone	73.2		P	40 - 140
Triclopyr	84.4		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323129

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1886862	Ammonia-N	102	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323135

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887421	Ammonia-N	103	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323272

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887654	Ammonia-N	104	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323212

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887374	Kjeldahl Nitrogen	96.1	96.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323288

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887441	Kjeldahl Nitrogen	102	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323500

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887685	Kjeldahl Nitrogen	96.2	95.1	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323319

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887292	NO2NO3-N	99.5	98.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323568

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887218	NO2NO3-N	96.5	95.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323257

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887176	Total-P	101	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323302

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887323	Total-P	102	96.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323426

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887710	Total-P	96.2	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323109

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887336	O-Phosphate-P	96.1	92.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323110

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887376	O-Phosphate-P	98.9	97.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323293

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887655	O-Phosphate-P	97.0	98.3	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P323139

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887573	Sucralose	87.3	98.0	P/P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
 Batch ID: P323537

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887371	Fluoride	93.7	95.3	P/P	91 - 105

Reference Method: SM 4500 F-C-97
 Batch ID: P324679

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1891234	Fluoride	98.4	99.0	P/P	91 - 105

Reference Method: SM 5310 B-00
 Batch ID: P323329

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887224	Organic Carbon	103	102	P/P	85 - 115

Reference Method: SM 5310 B-00
 Batch ID: P323331

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887215	Organic Carbon	98.7	94.9	P/P	85 - 115

Reference Method: SM 5310 B-00
 Batch ID: P323368

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887061	Organic Carbon	104	105	P/P	85 - 115

Reference Method: USGS O-2060-01
 Batch ID: P323095

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887113	2,4-D	124	103	P/P	40 - 140
1887113	Acetaminophen	66.0	78.8	P/P	40 - 140
1887113	Carbamazepine	77.2	73.6	P/P	40 - 140
1887113	Diuron	44.8	56.4	P/P	40 - 140
1887113	Fenuron	31.5	38.7	F/F	40 - 140
1887113	Fluridone	45.8	62.6	P/P	40 - 140
1887113	Imidacloprid	96.4	101	P/P	40 - 160
1887113	Linuron	70.8	74.0	P/P	40 - 140
1887113	MCP	98.0	116	P/P	40 - 140
1887113	Primidone	63.6	59.2	P/P	40 - 140
1887113	Triclopyr	122	113	P/P	40 - 140

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P323151

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887370	Turbidity	0.548	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P323264

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887530	Turbidity	2.84	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P323129

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1886862	Ammonia-N	0.242	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P323135

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887421	Ammonia-N	0.257	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P323272

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887654	Ammonia-N	1.97	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P323212

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887374	Kjeldahl Nitrogen	0.651	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P323288

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887441	Kjeldahl Nitrogen	0.663	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P323500

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887685	Kjeldahl Nitrogen	0.885	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P323319

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887292	NO2NO3-N	0.621	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323568

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887218	NO2NO3-N	1.57	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323257

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887176	Total-P	4.29	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323302

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887323	Total-P	4.36	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323426

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887710	Total-P	3.97	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323109

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887336	O-Phosphate-P	2.16	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323110

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887376	O-Phosphate-P	1.22	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323293

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887655	O-Phosphate-P	1.33	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P323139

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887573	Sucralose	11.5	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
Batch ID: P323535

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887371	Total Alkalinity	0.989	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P323886

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887805	Total Alkalinity	1.58	Sample	P	0 - 4.8

Reference Method: SM 4500 F-C-97
Batch ID: P323537

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887371	Fluoride	0.972	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P324679

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1891234	Fluoride	0.487	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P323329

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887224	Organic Carbon	0.537	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P323331

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887215	Organic Carbon	3.39	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P323368

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887061	Organic Carbon	0.258	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P323095

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887113	2,4-D	19.0	Spike	P	0 - 30
1887113	Acetaminophen	17.7	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: USGS O-2060-01
Batch ID: P323095

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887113	Bentazon	0.944	Spike	P	0 - 30
1887113	Carbamazepine	4.77	Spike	P	0 - 30
1887113	Diuron	22.9	Spike	P	0 - 30
1887113	Fenuron	20.4	Spike	P	0 - 30
1887113	Fluridone	29.4	Spike	P	0 - 30
1887113	Imidacloprid	4.86	Spike	P	0 - 30
1887113	Linuron	4.42	Spike	P	0 - 30
1887113	MCP	16.5	Spike	P	0 - 30
1887113	Primidone	7.17	Spike	P	0 - 30
1887113	Triclopyr	8.16	Spike	P	0 - 30

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Surrogates

Lab Sample ID: 1887660
Field Sample ID: G4NW0402

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	83.0	P	40 - 150
USGS O-2060-01	2,4-D-d3	96.8	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	67.0	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	101	P	40 - 160
USGS O-2060-01	Diuron-d6	78.0	P	40 - 150
USGS O-2060-01	Primidone-d5	109	P	40 - 150

Lab Sample ID: 1887661
Field Sample ID: G4NW0402DUPLICATE

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	102	P	40 - 150
USGS O-2060-01	2,4-D-d3	96.0	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	64.0	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	102	P	40 - 160
USGS O-2060-01	Diuron-d6	70.8	P	40 - 150
USGS O-2060-01	Primidone-d5	110	P	40 - 150

Lab Sample ID: 1887662
Field Sample ID: FIELDBLANK

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	106	P	40 - 150
USGS O-2060-01	2,4-D-d3	98.8	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	109	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	135	P	40 - 160
USGS O-2060-01	Diuron-d6	90.2	P	40 - 150
USGS O-2060-01	Primidone-d5	114	P	40 - 150

Quality Assurance Report Surrogates

Lab Sample ID: 1887663
Field Sample ID: G4NW0401

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	83.5	P	40 - 150
USGS O-2060-01	2,4-D-d3	100	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	64.6	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	82.2	P	40 - 160
USGS O-2060-01	Diuron-d6	75.4	P	40 - 150
USGS O-2060-01	Primidone-d5	104	P	40 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A75721
Included Lab Sample IDs: 1887376, 1887377, 1887378

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.5	98.2	P/P	90 - 110
O-Phosphate-P	98.2	96.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A75725
Included Lab Sample IDs: 1887373, 1887374, 1887375

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

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A75732
Included Lab Sample IDs: 1887370, 1887371, 1887372

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

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A75748
Included Lab Sample IDs: 1887653

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	99.5	P/P	95 - 105

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A75750
Included Lab Sample IDs: 1887654

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A75754

Included Lab Sample IDs: 1887373, 1887374

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	106	98.6	P/P	90 - 110
Kjeldahl Nitrogen	99.4	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A75755

Included Lab Sample IDs: 1887655

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.3	97.7	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A75756

Included Lab Sample IDs: 1887660, 1887661, 1887663

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	91.1	96.4	P/P	60 - 150

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A75759

Included Lab Sample IDs: 1887375

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	96.5	94.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A75765

Included Lab Sample IDs: 1887373, 1887374

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.5	98.8	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A75769

Included Lab Sample IDs: 1887373, 1887374, 1887375

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.6	98.2	P/P	90 - 110
Organic Carbon	95.6	98.8	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A75775

Included Lab Sample IDs: 1887654

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	104	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A75781

Included Lab Sample IDs: 1887375

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A75781

Included Lab Sample IDs: 1887375

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	104	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A75783

Included Lab Sample IDs: 1887662

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	108	102	P/P	60 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A75787

Included Lab Sample IDs: 1887375

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

Reference Method: USGS O-2060-01

Run ID: A75820

Included Lab Sample IDs: 1887660, 1887661, 1887662, 1887663

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	105	109	P/P	50 - 150
Bentazon	91.0	78.2	P/P	50 - 150
MCPP	133	137	P/P	50 - 150
Triclopyr	109	116	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A75826

Included Lab Sample IDs: 1887654

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

Reference Method: SM 2320 B-97

Run ID: A75833

Included Lab Sample IDs: 1887370, 1887371, 1887653

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	104	P/P	90 - 110
Total Alkalinity	104	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A75833

Included Lab Sample IDs: 1887370, 1887371, 1887653

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	97.9	97.7	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A75838

Included Lab Sample IDs: 1887373, 1887374, 1887654

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	97.0	96.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A75842

Included Lab Sample IDs: 1887654

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

Reference Method: USGS O-2060-01

Run ID: A75847

Included Lab Sample IDs: 1887660, 1887661, 1887662, 1887663

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	124	121	P/P	60 - 150
Carbamazepine	131	146	P/P	60 - 150
Diuron	121	122	P/P	60 - 150
Fenuron	127	124	P/P	60 - 150
Fluridone	115	104	P/P	60 - 150
Imidacloprid	98.8	95.2	P/P	60 - 150
Linuron	129	92.0	P/P	60 - 150
Primidone	103	115	P/P	60 - 150

Reference Method: SM 2320 B-97

Run ID: A75952

Included Lab Sample IDs: 1887372

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	105	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A76201

Included Lab Sample IDs: 1887372

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	100	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 SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				0.548	
	Turbidity				2.84	
EPA 350.1 Rev. 2.0	Ammonia-N	103	102 102			0.242
	Ammonia-N	103	103 102			0.257

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 350.1 Rev. 2.0	Ammonia-N	99.3	104	102		1.97
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	96.6	96.1	96.8		0.651
	Kjeldahl Nitrogen	101	102	102		0.663
	Kjeldahl Nitrogen	101	96.2	95.1		0.885
	Kjeldahl Nitrogen	101	96.2	95.1		0.885
EPA 353.2 Rev. 2.0	NO2NO3-N	98.5	99.5	98.5		0.621
	NO2NO3-N	99.0	96.5	95.0		1.57
EPA 365.1 Rev. 2.0	Total-P	103	101	106		4.29
	Total-P	100	102	96.4		4.36
	Total-P	101	96.2	100		3.97
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.5	96.1	92.9		2.16
	O-Phosphate-P	98.9	98.9	97.7		1.22
	O-Phosphate-P	97.0	97.0	98.3		1.33
EPA 8321B	Sucralose	104	87.3	98.0		11.5
SM 2320 B-97	Total Alkalinity	103			0.989	
	Total Alkalinity	104			1.58	
SM 4500 F-C-97	Fluoride	95.0	93.7	95.3		0.972
	Fluoride	98.1	98.4	99.0		0.487
SM 5310 B-00	Organic Carbon	101	103	102		0.537
	Organic Carbon	101	98.7	94.9		3.39
	Organic Carbon	104	104	105		0.258
USGS O-2060-01	2,4-D	85.6	124	103		19.0
	Acetaminophen	110	66.0	78.8		17.7
	Bentazon	106				0.944
	Carbamazepine	99.6	77.2	73.6		4.77
	Diuron	80.8	44.8	56.4		22.9
	Fenuron	96.4	31.5	38.7		20.4
	Fluridone	90.4	45.8	62.6		29.4
	Imidacloprid	78.0	96.4	101		4.86
	Linuron	67.2	70.8	74.0		4.42
	MCPP	100	98.0	116		16.5
	Primidone	73.2	63.6	59.2		7.17
	Triclopyr	84.4	122	113		8.16

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1887370, 1887371, 1887372, 1887653
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1887373, 1887374, 1887375, 1887654
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1887373, 1887374, 1887375, 1887654
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1887373, 1887374, 1887375, 1887654
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1887373, 1887374, 1887375, 1887654
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1887376, 1887377, 1887378, 1887655
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1887660, 1887661, 1887662, 1887663
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1887370, 1887371, 1887372, 1887653
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1887370, 1887371, 1887372, 1887653
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1887370, 1887371, 1887372, 1887653
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1887373, 1887374, 1887375, 1887654
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1887660, 1887661, 1887662, 1887663

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1887660, 1887661, 1887662, 1887663

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	04/11/2017			04/11/2017 16:14	Blanca Fach	1887370, 1887371, 1887372
	04/12/2017			04/12/2017 12:33	Sima Feizi	1887653
EPA 350.1 Rev. 2.0	04/11/2017			04/11/2017	Julie Michelle Frank	1887373, 1887374, 1887375
	04/12/2017			04/12/2017	Julie Michelle Frank	1887654
EPA 351.2 Rev. 2.0	04/11/2017	04/12/2017	Adrian Shelby	04/13/2017	Joseph Suarez	1887373, 1887374
	04/11/2017	04/13/2017	Adrian Shelby	04/14/2017	Joseph Suarez	1887375
	04/12/2017	04/17/2017	Adrian Shelby	04/18/2017	Joseph Suarez	1887654
EPA 353.2 Rev. 2.0	04/11/2017			04/13/2017	Beverly Y. Sanders	1887375
	04/11/2017			04/18/2017	Beverly Y. Sanders	1887373, 1887374
	04/12/2017			04/18/2017	Beverly Y. Sanders	1887654
EPA 365.1 Rev. 2.0	04/11/2017	04/12/2017	Vijayalakshmi Reddy	04/13/2017	Lipi Saha	1887373, 1887374
	04/11/2017	04/13/2017	Adrian Shelby	04/14/2017	Lipi Saha	1887375
	04/12/2017	04/14/2017	Vijayalakshmi Reddy	04/17/2017	Lipi Saha	1887654
EPA 365.1 Rev. 2.0 dissolved	04/11/2017			04/11/2017 15:17	Lipi Saha	1887378
	04/11/2017			04/11/2017 15:20	Lipi Saha	1887376
	04/11/2017			04/11/2017 15:27	Lipi Saha	1887377
	04/12/2017			04/12/2017 13:30	Anthony C. Onicha	1887655
EPA 8321B	04/12/2017	04/12/2017	Mohammad Ghaffari	04/12/2017	Mohammad Ghaffari	1887660, 1887661, 1887663
	04/12/2017	04/12/2017	Mohammad Ghaffari	04/13/2017	Mohammad Ghaffari	1887662
SM 2320 B-97	04/11/2017			04/16/2017	Dale L. Simmons	1887370, 1887371
	04/11/2017			04/22/2017	Dale L. Simmons	1887372
	04/12/2017			04/16/2017	Dale L. Simmons	1887653
SM 2540 D-97	04/11/2017			04/14/2017	Yijie Li	1887370, 1887371, 1887372
	04/12/2017			04/14/2017	Yijie Li	1887653
SM 4500 F-C-97	04/11/2017			04/16/2017	Dale L. Simmons	1887370, 1887371
	04/11/2017			05/02/2017	Dale L. Simmons	1887372
	04/12/2017			04/16/2017	Dale L. Simmons	1887653
SM 5310 B-00	04/11/2017			04/12/2017	Julie Michelle Frank	1887375
	04/11/2017			04/13/2017	Julie Michelle Frank	1887373, 1887374
	04/12/2017			04/13/2017	Julie Michelle Frank	1887654
USGS O-2060-01	04/12/2017	04/12/2017	Fe-Val Siddell	04/15/2017	Juyoung Kim	1887660, 1887661, 1887662, 1887663
	04/12/2017	04/12/2017	Fe-Val Siddell	04/16/2017	Juyoung Kim	1887660, 1887661, 1887662, 1887663