

Chemical Analysis Report

NE-DIST-2018-03-06-01

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

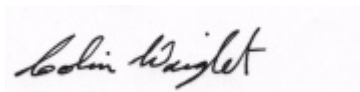
Event Description: **bmap tribs**
Request ID: **RQ-2018-03-05-25**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
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8800 Baymeadows Way West
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Certified by: Colin Wright, Program Administrator

Date Certified: 03-APR-2018 15:23

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: Metals, 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: NW TRIBUTARY TO OPEN CR AT HODGES

Collection Date/Time: 03/05/2018 09:40

Field ID: 20030848

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1971784	EPA 180.1 Rev. 2.0	Turbidity	3.0		NTU	P341070	
	EPA 300.0 Rev. 2.1	Chloride	37		mg Cl/L	P341224	
		Sulfate	71		mg SO4/L	P341228	
	SM 2120 B	Color (true)	37		PCU	P341019	
	SM 2320 B-97	Total Alkalinity	73		mg CaCO3/L	P341453	
	SM 2540 C-97	TDS	270		mg/L	P341466	
	SM 2540 D-97	TSS	3	I	mg/L	P341374	
	SM 4500 F-C-97	Fluoride	0.088	I	mg F/L	P341458	
1971786	EPA 350.1 Rev. 2.0	Ammonia-N	0.11		mg N/L	P341405	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.56		mg N/L	P341293	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.29		mg N/L	P341199	
	EPA 365.1 Rev. 2.0	Total-P	0.046		mg P/L	P341102	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P341193	
1971788	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.016		mg P/L	P341050	
1971840	EPA 8321B	2,4-D	0.0047	I	ug/L	P340883	
		Sucralose**	0.31		ug/L	P340984	
		Bentazon	0.027		ug/L	P340883	MS
		MCP	0.0020	U	ug/L	P340883	MS
		Triclopyr**	0.0040	U	ug/L	P340883	MS
		Imidacloprid	0.021		ug/L	P340883	MS
		Diuron	0.0020	U	ug/L	P340883	
		Primidone**	0.0040	U	ug/L	P340883	
		Linuron	0.0040	U	ug/L	P340883	
		Acetaminophen**	0.0080	U	ug/L	P340883	
		Fenuron	0.0080	U	ug/L	P340883	
		Imazapyr**	0.14		ug/L	P340883	MS
		Carbamazepine**	4.0E-04	U	ug/L	P340883	
		Fluridone**	0.042		ug/L	P340883	

Ref. Method and Comment:

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

EPA 8321B: Fenuron was detected in the method blank slightly above the MDL.

Sample Location: TERRAPIN CREEK AT FAYE ROAD

Collection Date/Time: 03/05/2018 10:35

Field ID: 20030653

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1971785	EPA 180.1 Rev. 2.0	Turbidity	4.8		NTU	P341070	
	EPA 300.0 Rev. 2.1	Chloride	82		mg Cl/L	P341224	
		Sulfate	83		mg SO4/L	P341228	
	SM 2120 B	Color (true)	42		PCU	P341019	
	SM 2320 B-97	Total Alkalinity	77		mg CaCO3/L	P341453	
	SM 2540 C-97	TDS	378		mg/L	P341466	
	SM 2540 D-97	TSS	4	I	mg/L	P341374	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P341458	

Field ID: 20030653

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1971787	EPA 350.1 Rev. 2.0	Ammonia-N	0.046		mg N/L	P341405	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.63		mg N/L	P341293	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.25		mg N/L	P341199	
	EPA 365.1 Rev. 2.0	Total-P	0.047		mg P/L	P341102	
	SM 5310 B-00	Organic Carbon	8.6		mg C/L	P341193	
1971789	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.011		mg P/L	P341050	
1971841	EPA 8321B	2,4-D	0.0020	U	ug/L	P340883	
		Sucralose**	0.010	U	ug/L	P340984	
		Bentazon	8.0E-04	U	ug/L	P340883	MS
		MCP	0.0020	U	ug/L	P340883	MS
		Triclopyr**	0.0040	U	ug/L	P340883	MS
		Imidacloprid	0.0020	U	ug/L	P340883	MS
		Diuron	0.0020	U	ug/L	P340883	
		Primidone**	0.0040	U	ug/L	P340883	
		Linuron	0.0040	U	ug/L	P340883	
		Acetaminophen**	0.0080	U	ug/L	P340883	
		Fenuron	0.0080	U	ug/L	P340883	
		Imazapyr**	0.0040	U	ug/L	P340883	MS
		Carbamazepine**	4.0E-04	U	ug/L	P340883	
		Fluridone**	8.0E-04	U	ug/L	P340883	

Ref. Method and Comment:

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

EPA 8321B: Fenuron was detected in the method blank slightly above the MDL.

**Sample Location: TROUT R @ DINSMORE BOAT RAMP DOCK
NR US 1**

Collection Date/Time: 03/05/2018 11:40

Field ID: 20030123

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1971799	EPA 180.1 Rev. 2.0	Turbidity	6.8	A	NTU	P341071	
	SM 2320 B-97	Total Alkalinity	58		mg CaCO3/L	P341453	
	SM 2540 D-97	TSS	6	I	mg/L	P341378	
	SM 4500 F-C-97	Fluoride	0.13		mg F/L	P341458	
1971800	EPA 350.1 Rev. 2.0	Ammonia-N	0.054		mg N/L	P341405	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.89		mg N/L	P341293	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.070		mg N/L	P341200	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P341102	
	SM 5310 B-00	Organic Carbon	24		mg C/L	P341193	
1971801	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.097		mg P/L	P341051	
1971845	EPA 8321B	2,4-D	0.0031	I	ug/L	P340883	
		Sucralose**	0.26		ug/L	P340984	
		Bentazon	0.0025	I	ug/L	P340883	MS
		MCP	0.0020	U	ug/L	P340883	MS
		Triclopyr**	0.0040	U	ug/L	P340883	MS
		Imidacloprid	0.014		ug/L	P340883	MS

Field ID: 20030123

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1971845	EPA 8321B	Diuron	0.0020	U	ug/L	P340883	
		Primidone**	0.0040	U	ug/L	P340883	
		Linuron	0.0040	U	ug/L	P340883	
		Acetaminophen**	0.0080	U	ug/L	P340883	
		Fenuron	0.0080	U	ug/L	P340883	
		Imazapyr**	0.065		ug/L	P340883	MS
		Carbamazepine**	4.0E-04	U	ug/L	P340883	
		Fluridone**	0.0037		ug/L	P340883	

Ref. Method and Comment:
EPA 8321B: Fenuron was detected in the method blank slightly above the MDL.

Sample Location: MONCRIEF CR @ 21ST ST

Collection Date/Time: 03/05/2018 12:40

Field ID: 20030897

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1971790	EPA 180.1 Rev. 2.0	Turbidity	9.1		NTU	P341070	
	EPA 300.0 Rev. 2.1	Chloride	25		mg Cl/L	P341224	
		Sulfate	49		mg SO4/L	P341228	
	SM 2120 B	Color (true)	23		PCU	P341019	
	SM 2320 B-97	Total Alkalinity	176		mg CaCO3/L	P341453	
	SM 2540 C-97	TDS	295		mg/L	P341466	
	SM 2540 D-97	TSS	3	I	mg/L	P341374	
	SM 4500 F-C-97	Fluoride	0.17		mg F/L	P341458	
1971793	EPA 350.1 Rev. 2.0	Ammonia-N	0.083		mg N/L	P341405	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.37		mg N/L	P341293	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.13		mg N/L	P341199	
	EPA 365.1 Rev. 2.0	Total-P	0.040		mg P/L	P341102	
	SM 5310 B-00	Organic Carbon	5.3		mg C/L	P341193	
1971796	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.008	I	mg P/L	P341051	
1971842	EPA 8321B	2,4-D	0.0020	U	ug/L	P340883	
		Sucralose**	0.16		ug/L	P340984	
		Bentazon	0.0033		ug/L	P340883	MS
		MCP	0.0020	U	ug/L	P340883	MS
		Triclopyr**	0.0040	U	ug/L	P340883	MS
		Imidacloprid	0.037		ug/L	P340883	MS
		Diuron	0.0020	U	ug/L	P340883	
		Primidone**	0.0040	U	ug/L	P340883	
		Linuron	0.0040	U	ug/L	P340883	
		Acetaminophen**	0.063		ug/L	P340883	
		Fenuron	0.0080	U	ug/L	P340883	
		Imazapyr**	0.075		ug/L	P340883	MS
		Carbamazepine**	4.0E-04	U	ug/L	P340883	
		Fluridone**	9.8E-04	I	ug/L	P340883	
1971846	EPA 200.7 Rev. 4.4	Calcium	73.3		mg/L	P341089	
		Iron	1.11E+03		ug/L	P341089	

Field ID: 20030897

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1971846	EPA 200.7 Rev. 4.4	Magnesium	10.6		mg/L	P341089	
		Potassium	2.6		mg/L	P341089	
		Sodium	22.2		mg/L	P341089	
		Zinc	5.0	U	ug/L	P341089	
	EPA 200.8 Rev. 5.4	Arsenic	0.98		ug/L	P341089	
		Cadmium	0.020	U	ug/L	P341089	
		Chromium	0.40	U	ug/L	P341089	
		Copper	0.33	I	ug/L	P341089	
		Lead	0.096	I	ug/L	P341089	
		Nickel	0.84		ug/L	P341089	
		Silver	0.010	U	ug/L	P341089	

Ref. Method and Comment:

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

EPA 8321B: Fenuron was detected in the method blank slightly above the MDL.

Sample Location: MONCRIEF CR N OF 33RD ST BRID

Collection Date/Time: 03/05/2018 13:05

Field ID: 20030316

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1971791	EPA 180.1 Rev. 2.0	Turbidity	5.9		NTU	P341070	
	EPA 300.0 Rev. 2.1	Chloride	25		mg Cl/L	P341224	
		Sulfate	47		mg SO4/L	P341228	
		Color (true)	16		PCU	P341019	
	SM 2320 B-97	Total Alkalinity	162		mg CaCO3/L	P341453	
	SM 2540 C-97	TDS	312		mg/L	P341466	
	SM 2540 D-97	TSS	6	I	mg/L	P341374	
	SM 4500 F-C-97	Fluoride	0.18		mg F/L	P341458	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P341405	
		Kjeldahl Nitrogen	0.57		mg N/L	P341293	
1971794	EPA 353.2 Rev. 2.0	NO2NO3-N	0.054		mg N/L	P341199	
	EPA 365.1 Rev. 2.0	Total-P	0.044		mg P/L	P341082	
	SM 5310 B-00	Organic Carbon	7.0		mg C/L	P341193	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P341051	
	EPA 8321B	2,4-D	0.0028	I	ug/L	P340883	
		Sucralose**	0.26		ug/L	P340984	
		Bentazon	0.0031	I	ug/L	P340883	MS
		MCP	0.0020	U	ug/L	P340883	MS
		Triclopyr**	0.0040	U	ug/L	P340883	MS
		Imidacloprid	0.015		ug/L	P340883	MS
		Diuron	0.0027	I	ug/L	P340883	
		Primidone**	0.0040	U	ug/L	P340883	
		Linuron	0.0040	U	ug/L	P340883	
		Acetaminophen**	0.064		ug/L	P340883	
		Fenuron	0.0080	U	ug/L	P340883	
		Imazapyr**	0.070		ug/L	P340883	MS
		Carbamazepine**	4.0E-04	U	ug/L	P340883	

Field ID: 20030316

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1971843	EPA 8321B	Fluridone**	0.0016	I	ug/L	P340883	
1971847	EPA 200.7 Rev. 4.4	Calcium	68.7		mg/L	P341089	
		Iron	600		ug/L	P341089	
		Magnesium	10.1		mg/L	P341089	
		Potassium	2.5		mg/L	P341089	
		Sodium	21.2		mg/L	P341089	
		Zinc	5.0	U	ug/L	P341089	
	EPA 200.8 Rev. 5.4	Arsenic	1.42		ug/L	P341089	
		Cadmium	0.020	U	ug/L	P341089	
		Chromium	0.40	U	ug/L	P341089	
		Copper	0.59	I	ug/L	P341089	
		Lead	0.45		ug/L	P341089	
		Nickel	0.82		ug/L	P341089	
		Silver	0.010	U	ug/L	P341089	

Ref. Method and Comment:

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

EPA 8321B: Fenuron was detected in the method blank slightly above the MDL.

Sample Location: GOODBYS CR @ PLAZA GATE RD

Collection Date/Time: 03/05/2018 14:05

Field ID: 20030537

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1971792	EPA 180.1 Rev. 2.0	Turbidity	6.5		NTU	P341070	
	EPA 300.0 Rev. 2.1	Chloride	19		mg Cl/L	P341224	
		Sulfate	15		mg SO4/L	P341228	
	SM 2120 B	Color (true)	34		PCU	P341019	
	SM 2320 B-97	Total Alkalinity	127		mg CaCO3/L	P341453	
	SM 2540 C-97	TDS	206	A	mg/L	P341467	
	SM 2540 D-97	TSS	3	IA	mg/L	P341375	
	SM 4500 F-C-97	Fluoride	0.14		mg F/L	P341458	
1971795	EPA 350.1 Rev. 2.0	Ammonia-N	0.026		mg N/L	P341405	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.45		mg N/L	P341293	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.013		mg N/L	P341200	
	EPA 365.1 Rev. 2.0	Total-P	0.071		mg P/L	P341102	
	SM 5310 B-00	Organic Carbon	8.9		mg C/L	P341193	
1971798	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.013		mg P/L	P341051	
1971844	EPA 8321B	2,4-D	0.0020	U	ug/L	P340883	
		Sucralose**	0.14		ug/L	P340984	
		Bentazon	0.0091		ug/L	P340883	MS
		MCP	0.0024	I	ug/L	P340883	MS
		Triclopyr**	0.0040	U	ug/L	P340883	MS
		Imidacloprid	0.013		ug/L	P340883	MS
		Diuron	0.0082		ug/L	P340883	
		Primidone**	0.0040	U	ug/L	P340883	
		Linuron	0.0040	U	ug/L	P340883	
		Acetaminophen**	0.0080	U	ug/L	P340883	

Field ID: 20030537

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1971844	EPA 8321B	Fenuron	0.012	IV	ug/L	P340883	
		Imazapyr**	0.17		ug/L	P340883	MS
		Carbamazepine**	4.0E-04	U	ug/L	P340883	
		Fluridone**	0.074		ug/L	P340883	
1971848	EPA 200.7 Rev. 4.4	Calcium	50.4		mg/L	P341089	
		Iron	1.47E+03		ug/L	P341089	
		Magnesium	5.49		mg/L	P341089	
		Potassium	1.1	I	mg/L	P341089	
	EPA 200.8 Rev. 5.4	Sodium	14.7		mg/L	P341089	
		Zinc	5.0	U	ug/L	P341089	
		Arsenic	2.25		ug/L	P341089	
		Cadmium	0.020	U	ug/L	P341089	
		Chromium	0.40	U	ug/L	P341089	
		Copper	0.71	I	ug/L	P341089	
		Lead	0.057	I	ug/L	P341089	
		Nickel	0.32	I	ug/L	P341089	
		Silver	0.010	U	ug/L	P341089	

Ref. Method and Comment:

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

EPA 8321B: Fenuron was detected in the method blank slightly above the MDL.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P341070

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P341071

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P341089

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P341089

Component	Result	Code	Units
Arsenic	0.050	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P341089

Component	Result	Code	Units
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.20	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.20	U	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341224

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341228

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341405

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341293

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341199

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341200

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341082

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
Batch ID: P341102

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341050

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341051

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

Reference Method: EPA 8321B
Batch ID: P340883

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.021	I	ug/L
Fluridone	8.0E-04	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
MCP	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P340984

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P341019

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P341453

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

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 C-97
Batch ID: P341466

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P341467

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P341374

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P341375

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P341378

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P341458

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P341193

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P341089

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	105		P	85 - 115
Iron	108		P	85 - 115
Magnesium	105		P	85 - 115
Potassium	106		P	85 - 115
Sodium	103		P	85 - 115
Zinc	101		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P341089

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	98.0		P	85 - 115
Cadmium	100		P	85 - 115
Chromium	98.3		P	85 - 115
Copper	96.8		P	85 - 115
Lead	106		P	85 - 115
Nickel	96.9		P	85 - 115
Silver	89.2		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341224

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341228

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341405

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341293

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.4		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341199

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341200

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	103		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341082

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341102

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341050

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: P341051

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

Reference Method: EPA 8321B
Batch ID: P340883

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	81.0		P	40 - 150
Acetaminophen	91.3		P	30 - 150
Bentazon	103		P	30 - 150
Carbamazepine	78.8		P	40 - 150
Diuron	65.0		P	40 - 150
Fenuron	95.5		P	40 - 150
Fluridone	66.0		P	40 - 150
Imazapyr	63.3		P	40 - 150
Imidacloprid	89.3		P	40 - 160
Linuron	73.6		P	40 - 150
MCPP	83.2		P	40 - 150
Primidone	100		P	40 - 150
Triclopyr	77.5		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P340984

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	100		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P341453

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.4		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P341458

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
Batch ID: P341193

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 200.7 Rev. 4.4
Batch ID: P341089

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1971848	Calcium	104		P	80 - 120
1971848	Iron	110		P	80 - 120
1971848	Magnesium	105		P	80 - 120
1971848	Potassium	107		P	80 - 120
1971848	Sodium	103		P	80 - 120
1971848	Zinc	101		P	80 - 120
1972137	Calcium	107		P	80 - 120
1972137	Iron	108	110	P/P	80 - 120
1972137	Magnesium	107		P	80 - 120
1972137	Potassium	107	110	P/P	80 - 120
1972137	Sodium	105		P	80 - 120
1972137	Zinc	100	101	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P341089

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1971848	Arsenic	100		P	80 - 120
1971848	Cadmium	102		P	80 - 120
1971848	Chromium	97.8		P	80 - 120
1971848	Copper	96.9		P	80 - 120
1971848	Lead	107		P	80 - 120
1971848	Nickel	96.4		P	80 - 120
1971848	Silver	89.6		P	80 - 120
1972137	Arsenic	101	101	P/P	80 - 120
1972137	Cadmium	105	103	P/P	80 - 120
1972137	Chromium	98.1	98.2	P/P	80 - 120
1972137	Copper	97.9	98.5	P/P	80 - 120
1972137	Lead	109	110	P/P	80 - 120
1972137	Nickel	98.1	97.9	P/P	80 - 120
1972137	Silver	90.4	90.0	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341224

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1971597	Chloride	99.5		P	90 - 110
1971598	Chloride	95.3		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341228

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1971597	Sulfate	101		P	90 - 110
1971598	Sulfate	96.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341405

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1971685	Ammonia-N	100	98.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341293

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1971795	Kjeldahl Nitrogen	108	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341199

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1971659	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341200

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1971800	NO2NO3-N	99.3	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341082

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1971765	Total-P	97.4	95.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341102

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1971793	Total-P	103	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341050

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1971586	O-Phosphate-P	96.9	95.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341051

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1971797	O-Phosphate-P	98.3	98.3	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P340883

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1972049	2,4-D	44.4	44.3	P/P	40 - 150
1972049	Acetaminophen	119	117	P/P	30 - 150
1972049	Bentazon	27.9	28.9	F/F	30 - 150
1972049	Carbamazepine	74.3	75.3	P/P	40 - 150
1972049	Diuron	55.3	56.0	P/P	40 - 150
1972049	Fenuron	67.5	74.7	P/P	40 - 150
1972049	Fluridone	59.9	59.9	P/P	40 - 150
1972049	Imazapyr	52.1	37.9	P/F	40 - 150
1972049	Imidacloprid	164	161	F/F	40 - 160
1972049	Linuron	77.1	72.0	P/P	40 - 150
1972049	MCP	30.8	31.9	F/F	40 - 150
1972049	Primidone	81.4	91.4	P/P	40 - 150
1972049	Triclopyr	40.0	45.0	F/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P340984

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1971431	Sucralose	98.3	104	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P341458

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1971581	Fluoride	92.6	93.7	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P341193

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1971599	Organic Carbon	94.4	95.7	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P341070

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971759	Turbidity	5.52	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P341071

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971799	Turbidity	1.02	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P341089

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972137	Calcium	1.51	Spike	P	0 - 20
1972137	Iron	2.11	Spike	P	0 - 20
1972137	Magnesium	2.28	Spike	P	0 - 20
1972137	Potassium	1.63	Spike	P	0 - 20
1972137	Sodium	1.33	Spike	P	0 - 20
1972137	Zinc	0.612	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P341089

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972137	Arsenic	0.0864	Spike	P	0 - 20
1972137	Cadmium	1.99	Spike	P	0 - 20
1972137	Chromium	0.171	Spike	P	0 - 20
1972137	Copper	0.534	Spike	P	0 - 20
1972137	Lead	0.528	Spike	P	0 - 20
1972137	Nickel	0.217	Spike	P	0 - 20
1972137	Silver	0.473	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341224

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971598	Chloride	1.67	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341228

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971598	Sulfate	1.67	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341405

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971685	Ammonia-N	1.33	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341293

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971795	Kjeldahl Nitrogen	4.14	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341199

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971659	NO2NO3-N	0.380	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341200

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971800	NO2NO3-N	0.742	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341082

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971765	Total-P	1.50	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341102

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971793	Total-P	1.18	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341050

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971586	O-Phosphate-P	0.887	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341051

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971797	O-Phosphate-P	0.0	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P340883

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972049	2,4-D	0.162	Spike	P	0 - 30
1972049	Acetaminophen	2.37	Spike	P	0 - 30
1972049	Bentazon	2.71	Spike	P	0 - 30
1972049	Carbamazepine	1.32	Spike	P	0 - 30
1972049	Diuron	1.26	Spike	P	0 - 30
1972049	Fenuron	10.2	Spike	P	0 - 30
1972049	Fluridone	0.0788	Spike	P	0 - 30
1972049	Imazapyr	13.5	Spike	P	0 - 30
1972049	Imidacloprid	1.62	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P340883

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972049	Linuron	6.78	Spike	P	0 - 30
1972049	MCPD	3.48	Spike	P	0 - 30
1972049	Primidone	11.7	Spike	P	0 - 30
1972049	Triclopyr	11.9	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P340984

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971431	Sucralose	5.28	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P341019

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971654	Color (true)	4.53	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P341453

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971581	Total Alkalinity	0.296	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P341466

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971582	TDS	3.74	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P341467

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971792	TDS	0.484	Sample	P	0 - 10

Reference Method: SM 2540 D-97
Batch ID: P341378

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971597	TSS	7.41	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P341458

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971581	Fluoride	0.987	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P341193

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971599	Organic Carbon	1.17	Spike	P	0 - 20

* 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: 1971840
Field Sample ID: 20030848

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	44.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	118	P	30 - 160
EPA 8321B	Carbamazepine-d10	72.6	P	30 - 160
EPA 8321B	Diuron-d6	64.8	P	30 - 160
EPA 8321B	Primidone-d5	94.2	P	30 - 160
EPA 8321B	Sucralose-d6	126	P	40 - 160

Lab Sample ID: 1971841
Field Sample ID: 20030653

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	46.1	P	30 - 160
EPA 8321B	Acetaminophen-d4	137	P	30 - 160
EPA 8321B	Carbamazepine-d10	80.6	P	30 - 160
EPA 8321B	Diuron-d6	72.4	P	30 - 160
EPA 8321B	Primidone-d5	102	P	30 - 160
EPA 8321B	Sucralose-d6	112	P	40 - 160

Lab Sample ID: 1971842
Field Sample ID: 20030897

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	42.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	147	P	30 - 160
EPA 8321B	Carbamazepine-d10	93.9	P	30 - 160
EPA 8321B	Diuron-d6	79.5	P	30 - 160
EPA 8321B	Primidone-d5	124	P	30 - 160
EPA 8321B	Sucralose-d6	106	P	40 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1971843
Field Sample ID: 20030316

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	37.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	123	P	30 - 160
EPA 8321B	Carbamazepine-d10	68.8	P	30 - 160
EPA 8321B	Diuron-d6	53.8	P	30 - 160
EPA 8321B	Primidone-d5	100	P	30 - 160
EPA 8321B	Sucralose-d6	113	P	40 - 160

Lab Sample ID: 1971844
Field Sample ID: 20030537

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	41.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	123	P	30 - 160
EPA 8321B	Carbamazepine-d10	77.1	P	30 - 160
EPA 8321B	Diuron-d6	59.8	P	30 - 160
EPA 8321B	Primidone-d5	103	P	30 - 160
EPA 8321B	Sucralose-d6	112	P	40 - 160

Lab Sample ID: 1971845
Field Sample ID: 20030123

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	51.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	132	P	30 - 160
EPA 8321B	Carbamazepine-d10	67.4	P	30 - 160
EPA 8321B	Diuron-d6	60.2	P	30 - 160
EPA 8321B	Primidone-d5	84.8	P	30 - 160
EPA 8321B	Sucralose-d6	139	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
Run ID: A82460
Included Lab Sample IDs: 1971784, 1971785, 1971790, 1971791, 1971792

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	101	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A82474
Included Lab Sample IDs: 1971788, 1971789, 1971796, 1971797, 1971798, 1971801

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.7	101	P/P	90 - 110
O-Phosphate-P	98.9	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A82476

Included Lab Sample IDs: 1971784, 1971785, 1971790, 1971791, 1971792, 1971799

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	99.5	P/P	95 - 105
Turbidity	99.5	99.0	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A82494

Included Lab Sample IDs: 1971795, 1971800

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A82497

Included Lab Sample IDs: 1971786, 1971787, 1971793

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	100	P/P	90 - 110
Total-P	103	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A82499

Included Lab Sample IDs: 1971840, 1971841, 1971842, 1971843, 1971844, 1971845

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	100	99.4	P/P	60 - 150
Sucralose	99.4	102	P/P	60 - 150

Reference Method: SM 5310 B-00

Run ID: A82505

Included Lab Sample IDs: 1971786, 1971787, 1971793, 1971794, 1971795, 1971800

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.8	97.0	P/P	90 - 110
Organic Carbon	96.3	95.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A82506

Included Lab Sample IDs: 1971786, 1971787, 1971793, 1971794, 1971795, 1971800

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	101	P/P	90 - 110
NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A82509

Included Lab Sample IDs: 1971784, 1971785, 1971790, 1971791, 1971792

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	96.9	97.5	P/P	90 - 110
Sulfate	98.0	97.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A82533

Included Lab Sample IDs: 1971794

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.2	99.8	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A82540

Included Lab Sample IDs: 1971846, 1971847, 1971848

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	103	101	P/P	90 - 110
Arsenic	97.8	98.5	P/P	90 - 110
Cadmium	100	101	P/P	90 - 110
Cadmium	99.0	99.4	P/P	90 - 110
Chromium	94.3	96.4	P/P	90 - 110
Chromium	97.8	98.2	P/P	90 - 110
Copper	101	99.8	P/P	90 - 110
Copper	95.7	97.4	P/P	90 - 110
Lead	105	105	P/P	90 - 110
Lead	107	107	P/P	90 - 110
Nickel	101	99.8	P/P	90 - 110
Nickel	95.6	96.6	P/P	90 - 110
Silver	101	101	P/P	90 - 110
Silver	104	104	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A82542

Included Lab Sample IDs: 1971846, 1971847, 1971848

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	103	99.8	P/P	90 - 110
Iron	103	99.8	P/P	90 - 110
Magnesium	104	101	P/P	90 - 110
Potassium	103	102	P/P	90 - 110
Sodium	101	99.6	P/P	90 - 110
Zinc	99.8	98.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A82549

Included Lab Sample IDs: 1971786, 1971787, 1971793, 1971794, 1971795, 1971800

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.2	98.8	P/P	90 - 110
Kjeldahl Nitrogen	98.8	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A82558

Included Lab Sample IDs: 1971786, 1971787, 1971793, 1971794, 1971795, 1971800

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	102	103	P/P	90 - 110
Ammonia-N	103	104	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-97

Run ID: A82571

Included Lab Sample IDs: 1971784, 1971785, 1971790, 1971791, 1971792, 1971799

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.5	99.7	P/P	90 - 110
Total Alkalinity	99.7	97.8	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A82571

Included Lab Sample IDs: 1971784, 1971785, 1971790, 1971791, 1971792, 1971799

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	103	106	P/P	90 - 110
Fluoride	106	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A82580

Included Lab Sample IDs: 1971840, 1971841, 1971842, 1971843, 1971844, 1971845

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	92.7	93.1	P/P	50 - 150
2,4-D	93.1	93.5	P/P	50 - 150
Acetaminophen	98.4	96.0	P/P	60 - 150
Bentazon	127	136	P/P	50 - 150
Bentazon	139	127	P/P	50 - 150
Carbamazepine	97.6	96.6	P/P	60 - 150
Diuron	88.6	99.0	P/P	60 - 150
Fenuron	95.6	92.8	P/P	60 - 150
Fluridone	109	105	P/P	60 - 160
Imazapyr	79.8	75.7	P/P	50 - 150
Imidacloprid	91.5	97.5	P/P	60 - 150
Linuron	107	96.0	P/P	60 - 150
MCP	94.3	99.2	P/P	50 - 150
MCP	99.2	98.4	P/P	50 - 150
Primidone	97.2	90.8	P/P	60 - 150
Triclopyr	83.7	96.4	P/P	50 - 150
Triclopyr	96.4	93.8	P/P	50 - 150

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				5.52	
	Turbidity				1.02	
EPA 200.7 Rev. 4.4	Calcium	105	104 107			1.51
	Iron	108	110 108 110			2.11
	Magnesium	105	105 107			2.28
	Potassium	106	107 107 110			1.63
	Sodium	103	103 105			1.33

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision LCS	SMP	MS
EPA 200.7 Rev. 4.4	Zinc	101	101	100	101			0.612
EPA 200.8 Rev. 5.4	Arsenic	98.0	100	101	101			0.0864
	Cadmium	100	102	105	103			1.99
	Chromium	98.3	97.8	98.1	98.2			0.171
	Copper	96.8	96.9	97.9	98.5			0.534
	Lead	106	107	109	110			0.528
	Nickel	96.9	96.4	98.1	97.9			0.217
	Silver	89.2	89.6	90.4	90.0			0.473
EPA 300.0 Rev. 2.1	Chloride	100	95.3	99.5			1.67	
	Sulfate	101	96.4	101			1.67	
EPA 350.1 Rev. 2.0	Ammonia-N	102	100	98.7				1.33
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	96.4	108	103				4.14
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	104	102	102				0.380
	NO ₂ NO ₃ -N	103	99.3	100				0.742
EPA 365.1 Rev. 2.0	Total-P	101	97.4	95.6				1.50
	Total-P	102	103	102				1.18
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.5	96.9	95.7				0.887
	O-Phosphate-P	102	98.3	98.3				0.0
EPA 8321B	2,4-D	81.0	44.4	44.3				0.162
	Acetaminophen	91.3	119	117				2.37
	Bentazon	103	27.9	28.9				2.71
	Carbamazepine	78.8	74.3	75.3				1.32
	Diuron	65.0	55.3	56.0				1.26
	Fenuron	95.5	67.5	74.7				10.2
	Fluridone	66.0	59.9	59.9				0.0788
	Imazapyr	63.3	52.1	37.9				13.5
	Imidacloprid	89.3	164	161				1.62
	Linuron	73.6	77.1	72.0				6.78
	MCPP	83.2	30.8	31.9				3.48
	Primidone	100	81.4	91.4				11.7
	Sucralose	100	98.3	104				5.28
	Triclopyr	77.5	40.0	45.0				11.9
SM 2120 B	Color (true)						4.53	
SM 2320 B-97	Total Alkalinity	99.4					0.296	
SM 2540 C-97	TDS						3.74	
	TDS						0.484	
SM 2540 D-97	TSS						7.41	
SM 4500 F-C-97	Fluoride	95.0	92.6	93.7				0.987
SM 5310 B-00	Organic Carbon	95.8	94.4	95.7				1.17

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1971784, 1971785, 1971790, 1971791, 1971792, 1971799
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1971846, 1971847, 1971848
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1971846, 1971847, 1971848
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1971784, 1971785, 1971790, 1971791, 1971792
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1971784, 1971785, 1971790, 1971791, 1971792

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1971786, 1971787, 1971793, 1971794, 1971795, 1971800
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1971786, 1971787, 1971793, 1971794, 1971795, 1971800
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1971786, 1971787, 1971793, 1971794, 1971795, 1971800
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1971786, 1971787, 1971793, 1971794, 1971795, 1971800
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1971788, 1971789, 1971796, 1971797, 1971798, 1971801
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1971840, 1971841, 1971842, 1971843, 1971844, 1971845
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1971840, 1971841, 1971842, 1971843, 1971844, 1971845
SM 2120 B / E31780	True Color measured at 450 nm	1971784, 1971785, 1971790, 1971791, 1971792
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1971784, 1971785, 1971790, 1971791, 1971792, 1971799
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1971784, 1971785, 1971790, 1971791, 1971792
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1971784, 1971785, 1971790, 1971791, 1971792, 1971799
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1971784, 1971785, 1971790, 1971791, 1971792, 1971799
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1971786, 1971787, 1971793, 1971794, 1971795, 1971800

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	03/06/2018			03/06/2018 17:11	DeAsia Armster	1971784, 1971785, 1971790, 1971791, 1971792, 1971799
EPA 200.7 Rev. 4.4	03/06/2018	03/07/2018	Elliott D. Healy	03/09/2018	Betina Topolski	1971846, 1971847, 1971848
EPA 200.8 Rev. 5.4	03/06/2018	03/07/2018	Elliott D. Healy	03/09/2018	Nadine Brooks	1971846, 1971847, 1971848
EPA 300.0 Rev. 2.1	03/06/2018			03/07/2018	Julia Storbeck	1971784, 1971785, 1971790, 1971791, 1971792
EPA 350.1 Rev. 2.0	03/06/2018			03/09/2018	Ping Hua	1971786, 1971787, 1971793, 1971794, 1971795, 1971800
EPA 351.2 Rev. 2.0	03/06/2018	03/09/2018	Adrian Shelby	03/12/2018	Joseph Suarez	1971786, 1971787, 1971793, 1971794, 1971795, 1971800
EPA 353.2 Rev. 2.0	03/06/2018			03/08/2018	Lauren Bottorf	1971786, 1971787, 1971793, 1971794, 1971795, 1971800
EPA 365.1 Rev. 2.0	03/06/2018	03/07/2018	Sima Feizi	03/08/2018	Beverly Y. Sanders	1971786, 1971787, 1971793, 1971795, 1971800
EPA 365.1 Rev. 2.0 dissolved	03/06/2018	03/07/2018	Sima Feizi	03/09/2018	Lipi Saha	1971794
	03/06/2018			03/06/2018 16:07	Megan Treadwell	1971797
	03/06/2018			03/06/2018 16:57	Megan Treadwell	1971788
	03/06/2018			03/06/2018 16:58	Megan Treadwell	1971789, 1971796
	03/06/2018			03/06/2018 16:59	Megan Treadwell	1971798
EPA 8321B	03/06/2018	03/07/2018	Hoor Shaik	03/06/2018 17:00	Megan Treadwell	1971801
	03/08/2018				Julie Michelle Frank	1971840, 1971841, 1971842, 1971843, 1971844, 1971845
	03/06/2018	03/07/2018	Hoor Shaik	03/09/2018	Julie Michelle Frank	1971840, 1971841, 1971842, 1971843, 1971844, 1971845
	03/06/2018	03/07/2018	Julie Michelle Frank	03/07/2018	Juyoung Kim	1971840, 1971841, 1971842, 1971843, 1971844
SM 2120 B	03/06/2018	03/07/2018	Julie Michelle Frank	03/08/2018	Juyoung Kim	1971845
	03/06/2018			03/06/2018 14:21	Tanya Welborn	1971784, 1971785
	03/06/2018			03/06/2018 14:22	Tanya Welborn	1971790
	03/06/2018			03/06/2018 14:23	Tanya Welborn	1971791
	03/06/2018			03/06/2018 14:24	Tanya Welborn	1971792
SM 2320 B-97	03/06/2018			03/13/2018	Dale L. Simmons	1971784, 1971785, 1971790, 1971791, 1971792, 1971799
SM 2540 C-97	03/06/2018			03/07/2018	Yijie Li	1971784, 1971785, 1971790, 1971791, 1971792
SM 2540 D-97	03/06/2018			03/07/2018	Yijie Li	1971784, 1971785, 1971790, 1971791, 1971792, 1971799
SM 4500 F-C-97	03/06/2018			03/13/2018	Dale L. Simmons	1971784, 1971785, 1971790, 1971791, 1971792, 1971799
SM 5310 B-00	03/06/2018			03/07/2018	Megan Treadwell	1971786, 1971787, 1971793, 1971794, 1971795, 1971800