Chemical Analysis Report

SW-DIST-2018-03-14-01

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

Event Description: **English, Turkey, Poley, Mustang**
Request ID: **RQ-2018-03-12-12**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator Date Certified: 30-MAR-2018 13:52

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: Mustang Ranch @ CR 39 **Collection Date/Time: 03/13/2018 10:55**

Field ID: G2SW0050 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1974741	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P341555	
	EPA 300.0 Rev. 2.1	Chloride	19		mg Cl/L	P342127	
		Sulfate	41		mg SO4/L	P342131	
	SM 2120 B	Color (true)	58		PCU	P341560	
	SM 2320 B-97	Total Alkalinity	47		mg CaCO3/L	P341930	RPD
	SM 2540 C-97	TDS	165		mg/L	P342012	
	SM 2540 D-97	TSS	4	I	mg/L	P341865	
	SM 4500 F-C-97	Fluoride	0.34		mg F/L	P342154	
1974744	EPA 350.1 Rev. 2.0	Ammonia-N	0.031		mg N/L	P342075	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.70		mg N/L	P341755	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.6		mg N/L	P341733	
	EPA 365.1 Rev. 2.0	Total-P	0.64		mg P/L	P341742	
	SM 5310 B-00	Organic Carbon	9.0		mg C/L	P342185	
1974747	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.60	Q	mg P/L	P341702	

Ref. Method and Comment:
EPA 180.1 Rev. 2.0: The result was confirmed on 03/14/2018.
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The sample was reanalyzed out of holding time due to analytical difficulties.

Sample Location: Mustang Ranch @ CR 39 **Collection Date/Time: 03/13/2018 10:55**

Field ID: G2SW0050 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1974769	EPA 8321B	2,4-D	0.0020	U	ug/L	P341440	
		Sucralose**	0.12		ug/L	P341353	
		Bentazon	8.0E-04	U	ug/L	P341440	
		MCPP	0.0020	U	ug/L	P341440	MS
		Triclopyr**	0.0040	U	ug/L	P341440	
		Imidacloprid	0.17		ug/L	P341440	
		Diuron	0.0098		ug/L	P341440	
		Pyraclostrobin**	0.0020	U	ug/L	P341440	
		Primidone**	0.0040	U	ug/L	P341440	
		Linuron	0.0040	U	ug/L	P341440	
		Acetaminophen**	0.018	I	ug/L	P341440	
		Fenuron	0.016	U	ug/L	P341440	
		Imazapyr**	0.017		ug/L	P341440	
		Carbamazepine**	4.0E-04	U	ug/L	P341440	RPD
		Fluridone**	8.0E-04	U	ug/L	P341440	

Sample Location: Mustang Ranch @ CR 39_dup **Collection Date/Time: 03/13/2018 11:00**

Field ID: G2SW0050 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1974742	EPA 180.1 Rev. 2.0	Turbidity	3.4		NTU	P341555	
	EPA 300.0 Rev. 2.1	Chloride	19		mg Cl/L	P342127	

Field ID: G2SW0050 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1974742	EPA 300.0 Rev. 2.1	Sulfate	39		mg SO4/L	P342131	
	SM 2120 B	Color (true)	57	A	PCU	P341556	
	SM 2320 B-97	Total Alkalinity	47		mg CaCO3/L	P341930	RPD
	SM 2540 C-97	TDS	163		mg/L	P342012	
	SM 2540 D-97	TSS	6	I	mg/L	P341865	
	SM 4500 F-C-97	Fluoride	0.35		mg F/L	P342154	
1974745	EPA 350.1 Rev. 2.0	Ammonia-N	0.030		mg N/L	P342075	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.78		mg N/L	P341755	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.6		mg N/L	P341734	
	EPA 365.1 Rev. 2.0	Total-P	0.64		mg P/L	P341742	
	SM 5310 B-00	Organic Carbon	9.0		mg C/L	P342185	
1974748	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.60	Q	mg P/L	P341702	

Ref. Method and Comment:
EPA 180.1 Rev. 2.0: The result was confirmed on 03/14/2018.
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The sample was reanalyzed out of holding time due to analytical difficulties.

Sample Location: BLANK **Collection Date/Time: 03/13/2018 12:00**

Field ID: blank Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1974743	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P341555	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P342127	
		Sulfate	0.20	U	mg SO4/L	P342131	
	SM 2120 B	Color (true)	2.5	U	PCU	P341560	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P341930	RPD
	SM 2540 C-97	TDS	15	U	mg/L	P342008	
	SM 2540 D-97	TSS	2	U	mg/L	P341861	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P342154	
1974746	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P342105	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P341755	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P341734	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P341742	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P342185	
1974749	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	UQ	mg P/L	P341702	

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The sample was reanalyzed out of holding time due to analytical difficulties.

Sample Location: Mustang Ranch Creek @ Hope Well **Collection Date/Time: 03/13/2018 10:40**

Field ID: G2SW0026 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1974770	EPA 8321B	2,4-D	0.0020	U	ug/L	P341440	
		Sucralose**	0.14		ug/L	P341576	
		Bentazon	8.0E-04	U	ug/L	P341440	
		MCPP	0.0020	U	ug/L	P341440	MS

Field ID: G2SW0026 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1974770	EPA 8321B	Triclopyr**	0.0040	U	ug/L	P341440	
		Imidacloprid	0.19		ug/L	P341440	
		Diuron	0.0098		ug/L	P341440	
		Pyraclostrobin**	0.0020	U	ug/L	P341440	
		Primidone**	0.0040	U	ug/L	P341440	
		Linuron	0.0040	U	ug/L	P341440	
		Acetaminophen**	0.0080	U	ug/L	P341440	
		Fenuron	0.016	U	ug/L	P341440	
		Imazapyr**	0.0095	I	ug/L	P341440	
		Carbamazepine**	4.0E-04	U	ug/L	P341440	RPD
		Fluridone**	8.0E-04	U	ug/L	P341440	

Sample Location: Poly Creek @ SR60 **Collection Date/Time: 03/13/2018 12:30**

Field ID: G2SW0049 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1974771	EPA 8321B	2,4-D	0.057		ug/L	P341440	
		Sucralose**	0.96		ug/L	P341576	
		Bentazon	0.0073		ug/L	P341440	
		MCPP	0.0020	U	ug/L	P341440	MS
		Triclopyr**	0.0040	U	ug/L	P341440	
		Imidacloprid	0.0039	I	ug/L	P341440	
		Diuron	0.0020	U	ug/L	P341440	
		Pyraclostrobin**	0.0020	U	ug/L	P341440	
		Primidone**	0.0040	U	ug/L	P341440	
		Linuron	0.0040	U	ug/L	P341440	
		Acetaminophen**	0.046		ug/L	P341440	
		Fenuron	0.016	U	ug/L	P341440	
		Imazapyr**	0.036		ug/L	P341440	
		Carbamazepine**	0.0024		ug/L	P341440	RPD
		Fluridone**	0.0058		ug/L	P341440	

Sample Location: Poly Creek @ Shepard Rd **Collection Date/Time: 03/13/2018 12:50**

Field ID: G2SW0014 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1974772	EPA 8321B	2,4-D	0.037		ug/L	P341543	
		Sucralose**	1.1		ug/L	P341576	
		Bentazon	0.0059		ug/L	P341543	MS
		MCPP	0.0020	U	ug/L	P341543	MS
		Triclopyr**	0.0040	U	ug/L	P341543	
		Imidacloprid	0.0043	I	ug/L	P341543	
		Diuron	0.0020	U	ug/L	P341543	
		Pyraclostrobin**	0.0020	U	ug/L	P341543	
		Primidone**	0.0040	U	ug/L	P341543	

Field ID: G2SW0014 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1974772	EPA 8321B	Linuron	0.0040	U	ug/L	P341543	
		Acetaminophen**	0.0099	I	ug/L	P341543	
		Fenuron	0.016	U	ug/L	P341543	
		Imazapyr**	0.029		ug/L	P341543	
		Carbamazepine**	0.0023		ug/L	P341543	
		Fluridone**	0.0055		ug/L	P341543	

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

Sample Location: English Creek above SR 60 **Collection Date/Time: 03/13/2018 11:40**

Field ID: G2SW0006 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1974773	EPA 8321B	2,4-D	0.054		ug/L	P341543	
		Sucralose**	0.24		ug/L	P341576	
		Bentazon	0.0039		ug/L	P341543	MS
		MCPP	0.0020	U	ug/L	P341543	MS
		Triclopyr**	0.0040	U	ug/L	P341543	
		Imidacloprid	0.013		ug/L	P341543	
		Diuron	0.077		ug/L	P341543	
		Pyraclostrobin**	0.0022	I	ug/L	P341543	
		Primidone**	0.0040	U	ug/L	P341543	
		Linuron	0.0040	U	ug/L	P341543	
		Acetaminophen**	0.0080	U	ug/L	P341543	
		Fenuron	0.016	U	ug/L	P341543	
		Imazapyr**	0.044		ug/L	P341543	
		Carbamazepine**	0.0025		ug/L	P341543	
		Fluridone**	0.014		ug/L	P341543	

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

Sample Location: English Creek @ Old Mulberry Rd **Collection Date/Time: 03/13/2018 12:20**

Field ID: G2SW0048 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1974774	EPA 8321B	2,4-D	0.029		ug/L	P341543	
		Sucralose**	0.14		ug/L	P341576	
		Bentazon	0.0072		ug/L	P341543	MS
		MCPP	0.0020	U	ug/L	P341543	MS
		Triclopyr**	0.0040	U	ug/L	P341543	
		Imidacloprid	0.0042	I	ug/L	P341543	
		Diuron	0.026		ug/L	P341543	
		Pyraclostrobin**	0.0035	I	ug/L	P341543	
		Primidone**	0.0040	U	ug/L	P341543	
		Linuron	0.0040	U	ug/L	P341543	
		Acetaminophen**	0.018	I	ug/L	P341543	
		Fenuron	0.016	U	ug/L	P341543	

Field ID: G2SW0048 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1974774	EPA 8321B	Imazapyr**	0.064		ug/L	P341543	
		Carbamazepine**	0.0016		ug/L	P341543	
		Fluridone**	0.0062		ug/L	P341543	

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

Sample Location: Turkey Creek @ Sydney Rd **Collection Date/Time: 03/13/2018 09:50**

Field ID: G2SW0025 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1974775	EPA 8321B	2,4-D	0.0020	U	ug/L	P341543	
		Sucralose**	0.37		ug/L	P341576	
		Bentazon	8.0E-04	U	ug/L	P341543	MS
		MCPP	0.0020	U	ug/L	P341543	MS
		Triclopyr**	0.0040	U	ug/L	P341543	
		Imidacloprid	0.083		ug/L	P341543	
		Diuron	0.0023	I	ug/L	P341543	
		Pyraclostrobin**	0.0056	I	ug/L	P341543	
		Primidone**	0.0040	U	ug/L	P341543	
		Linuron	0.0040	U	ug/L	P341543	
		Acetaminophen**	0.0080	U	ug/L	P341543	
		Fenuron	0.016	U	ug/L	P341543	
		Imazapyr**	0.014	I	ug/L	P341543	
		Carbamazepine**	4.0E-04	U	ug/L	P341543	
		Fluridone**	8.0E-04	U	ug/L	P341543	

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

Sample Location: Turkey Creek @ SR 60 **Collection Date/Time: 03/13/2018 10:10**

Field ID: G2SW0051 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1974776	EPA 8321B	2,4-D	0.0020	U	ug/L	P341543	
		Sucralose**	21		ug/L	P341576	
		Bentazon	0.0077		ug/L	P341543	MS
		MCPP	0.0041	I	ug/L	P341543	MS
		Triclopyr**	0.0040	U	ug/L	P341543	
		Imidacloprid	0.049		ug/L	P341543	
		Diuron	0.0047	I	ug/L	P341543	
		Pyraclostrobin**	0.0061	I	ug/L	P341543	
		Primidone**	0.090		ug/L	P341543	
		Linuron	0.0040	U	ug/L	P341543	
		Acetaminophen**	0.0080	U	ug/L	P341543	
		Fenuron	0.018	IV	ug/L	P341543	
		Imazapyr**	0.051		ug/L	P341543	
		Carbamazepine**	0.059		ug/L	P341543	
		Fluridone**	0.0019	I	ug/L	P341543	

Field ID: G2SW0051 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes

Ref. Method and Comment:
EPA 8321B: Fenuron was detected in the method blank slightly above the MDL. The qualifier V is due to detection of the analyte fenuron in the method blank.

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P341555

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342127

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342131

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P342075

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P342105

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341755

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341733

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341734

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: P341742

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341702

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

Reference Method: EPA 8321B
Batch ID: P341353

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P341440

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	0.0080	U	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
MCPP	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P341543

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	0.024	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
MCPP	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P341576

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P341556

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P341560

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P341930

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

Reference Method: SM 2540 C-97
Batch ID: P342008

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P342012

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P341861

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P341865

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P342154

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 5310 B-00
Batch ID: P342185

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342127

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342131

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P342075

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	90.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P342105

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	93.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341755

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341733

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341734

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: P341742

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341742

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341702

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.0		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P341353

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	88.0		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P341440

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	71.7		P	40 - 150
Acetaminophen	110		P	30 - 150
Bentazon	77.3		P	30 - 150
Carbamazepine	97.3		P	40 - 150
Diuron	66.7		P	40 - 150
Fenuron	99.8		P	40 - 150
Fluridone	60.4		P	40 - 150
Imazapyr	67.2		P	40 - 150
Imidacloprid	97.2		P	40 - 160
Linuron	71.7		P	40 - 150
MCPP	63.3		P	40 - 150
Primidone	103		P	40 - 150
Pyraclostrobin	62.7		P	40 - 150
Triclopyr	67.1		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P341543

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	79.8		P	40 - 150
Acetaminophen	113		P	30 - 150
Bentazon	77.1		P	30 - 150
Carbamazepine	94.6		P	40 - 150
Diuron	69.0		P	40 - 150
Fenuron	107		P	40 - 150
Fluridone	69.1		P	40 - 150
Imazapyr	74.4		P	40 - 150
Imidacloprid	98.7		P	40 - 160
Linuron	84.6		P	40 - 150
MCPP	79.4		P	40 - 150
Primidone	99.9		P	40 - 150
Pyraclostrobin	65.0		P	40 - 150
Triclopyr	79.1		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P341576

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	108		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P341930

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P342154

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.3		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P342185

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.6		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342127

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974679	Chloride	103		P	90 - 110
1974863	Chloride	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342131

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974679	Sulfate	106		P	90 - 110
1974863	Sulfate	106		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P342075

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974705	Ammonia-N	93.1	93.9	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P342105

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974866	Ammonia-N	97.6	94.9	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341755

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974867	Kjeldahl Nitrogen	106	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341733

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974646	NO2NO3-N	102		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341734

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974901	NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341742

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974868	Total-P	103	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341702

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1975298	O-Phosphate-P	98.5	99.1	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P341353

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974062	Sucralose	120	124	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P341440

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974889	2,4-D	52.5	49.4	P/P	40 - 150
1974889	Acetaminophen	136	113	P/P	30 - 150
1974889	Bentazon	31.8	30.5	P/P	30 - 150
1974889	Carbamazepine	95.6	69.0	P/P	40 - 150
1974889	Diuron	65.1	57.5	P/P	40 - 150
1974889	Fenuron	93.6	76.9	P/P	40 - 150
1974889	Fluridone	57.7	57.9	P/P	40 - 150
1974889	Imazapyr	62.5	57.5	P/P	40 - 150
1974889	Imidacloprid	152	118	P/P	40 - 160
1974889	Linuron	85.7	72.0	P/P	40 - 150
1974889	MCPP	37.0	35.0	F/F	40 - 150
1974889	Primidone	110	93.0	P/P	40 - 150
1974889	Pyraclostrobin	76.6	67.0	P/P	40 - 150
1974889	Triclopyr	40.4	41.3	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P341543

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1975063	2,4-D	56.1	48.2	P/P	40 - 150
1975063	Acetaminophen	128	118	P/P	30 - 150
1975063	Bentazon	31.5	28.3	P/F	30 - 150
1975063	Carbamazepine	85.2	106	P/P	40 - 150
1975063	Diuron	66.4	72.7	P/P	40 - 150
1975063	Fenuron	98.8	108	P/P	40 - 150
1975063	Fluridone	58.0	65.4	P/P	40 - 150
1975063	Imazapyr	68.7	70.3	P/P	40 - 150
1975063	Imidacloprid	135	114	P/P	40 - 160
1975063	Linuron	87.3	84.3	P/P	40 - 150
1975063	MCPP	44.6	40.0	P/F	40 - 150
1975063	Primidone	100	101	P/P	40 - 150
1975063	Pyraclostrobin	73.5	75.5	P/P	40 - 150
1975063	Triclopyr	44.8	43.6	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P341576

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974770	Sucralose	112	96.1	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P342154

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974865	Fluoride	95.0	96.5	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P342185

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974680	Organic Carbon	98.6	100	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P341555

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974891	Turbidity	0.105	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342127

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974679	Chloride	0.267	Sample	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342131

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974679	Sulfate	0.0839	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P342075

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974705	Ammonia-N	0.758	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P342105

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974866	Ammonia-N	1.59	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341755

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974867	Kjeldahl Nitrogen	3.99	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341733

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974646	NO2NO3-N	0.428	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341734

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974901	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341742

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974868	Total-P	2.33	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341702

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1975298	O-Phosphate-P	0.437	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P341353

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974062	Sucralose	3.16	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P341440

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974889	2,4-D	5.44	Spike	P	0 - 30
1974889	Acetaminophen	18.9	Spike	P	0 - 30
1974889	Bentazon	3.92	Spike	P	0 - 30
1974889	Carbamazepine	32.4	Spike	F	0 - 30
1974889	Diuron	12.4	Spike	P	0 - 30
1974889	Fenuron	19.5	Spike	P	0 - 30
1974889	Fluridone	0.353	Spike	P	0 - 30
1974889	Imazapyr	8.29	Spike	P	0 - 30
1974889	Imidacloprid	25.3	Spike	P	0 - 30
1974889	Linuron	17.4	Spike	P	0 - 30
1974889	MCPP	5.56	Spike	P	0 - 30
1974889	Primidone	17.1	Spike	P	0 - 30
1974889	Pyraclostrobin	13.3	Spike	P	0 - 30
1974889	Triclopyr	2.36	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P341543

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1975063	2,4-D	15.1	Spike	P	0 - 30
1975063	Acetaminophen	8.26	Spike	P	0 - 30
1975063	Bentazon	10.7	Spike	P	0 - 30
1975063	Carbamazepine	22.1	Spike	P	0 - 30
1975063	Diuron	9.14	Spike	P	0 - 30
1975063	Fenuron	8.63	Spike	P	0 - 30
1975063	Fluridone	12.0	Spike	P	0 - 30
1975063	Imazapyr	2.35	Spike	P	0 - 30
1975063	Imidacloprid	16.2	Spike	P	0 - 30
1975063	Linuron	3.52	Spike	P	0 - 30
1975063	MCPP	10.8	Spike	P	0 - 30
1975063	Primidone	0.686	Spike	P	0 - 30
1975063	Pyraclostrobin	2.70	Spike	P	0 - 30
1975063	Triclopyr	2.60	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P341576

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974770	Sucralose	14.7	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: SM 2120 B
Batch ID: P341556

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974742	Color (true)	2.17	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P341560

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974703	Color (true)	1.08	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P341930

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974865	Total Alkalinity	2.13	Sample	F	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P342008

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974327	TDS	6.98	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P342012

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974634	TDS	3.08	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P342154

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974865	Fluoride	1.42	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P342185

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974680	Organic Carbon	1.55	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

Quality Assurance Report
Surrogates

Lab Sample ID: 1974769
Field Sample ID: G2SW0050

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	60.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	106	P	30 - 160
EPA 8321B	Carbamazepine-d10	71.6	P	30 - 160
EPA 8321B	Diuron-d6	68.6	P	30 - 160
EPA 8321B	Primidone-d5	97.4	P	30 - 160
EPA 8321B	Sucralose-d6	97.5	P	40 - 160

Lab Sample ID: 1974770
Field Sample ID: G2SW0026

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	66.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	113	P	30 - 160
EPA 8321B	Carbamazepine-d10	93.2	P	30 - 160
EPA 8321B	Diuron-d6	76.0	P	30 - 160
EPA 8321B	Primidone-d5	103	P	30 - 160
EPA 8321B	Sucralose-d6	92.9	P	40 - 160

Lab Sample ID: 1974771
Field Sample ID: G2SW0049

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	61.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	116	P	30 - 160
EPA 8321B	Carbamazepine-d10	87.0	P	30 - 160
EPA 8321B	Diuron-d6	80.3	P	30 - 160
EPA 8321B	Primidone-d5	105	P	30 - 160
EPA 8321B	Sucralose-d6	79.6	P	40 - 160

Lab Sample ID: 1974772
Field Sample ID: G2SW0014

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	52.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	114	P	30 - 160
EPA 8321B	Carbamazepine-d10	80.5	P	30 - 160
EPA 8321B	Diuron-d6	70.5	P	30 - 160
EPA 8321B	Primidone-d5	94.4	P	30 - 160
EPA 8321B	Sucralose-d6	106	P	40 - 160

Lab Sample ID: 1974773
Field Sample ID: G2SW0006

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	51.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	132	P	30 - 160
EPA 8321B	Carbamazepine-d10	101	P	30 - 160
EPA 8321B	Diuron-d6	78.4	P	30 - 160
EPA 8321B	Primidone-d5	107	P	30 - 160
EPA 8321B	Sucralose-d6	90.3	P	40 - 160

Quality Assurance Report
Surrogates

Lab Sample ID: 1974774
Field Sample ID: G2SW0048

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	45.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	122	P	30 - 160
EPA 8321B	Carbamazepine-d10	73.9	P	30 - 160
EPA 8321B	Diuron-d6	72.5	P	30 - 160
EPA 8321B	Primidone-d5	105	P	30 - 160
EPA 8321B	Sucralose-d6	87.4	P	40 - 160

Lab Sample ID: 1974775
Field Sample ID: G2SW0025

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	62.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	118	P	30 - 160
EPA 8321B	Carbamazepine-d10	97.3	P	30 - 160
EPA 8321B	Diuron-d6	78.6	P	30 - 160
EPA 8321B	Primidone-d5	101	P	30 - 160
EPA 8321B	Sucralose-d6	112	P	40 - 160

Lab Sample ID: 1974776
Field Sample ID: G2SW0051

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	52.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	113	P	30 - 160
EPA 8321B	Carbamazepine-d10	73.0	P	30 - 160
EPA 8321B	Diuron-d6	64.5	P	30 - 160
EPA 8321B	Primidone-d5	93.9	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	40 - 160

Quality Assurance Report
Calibration Verification

Reference Method: SM 2120 B
Run ID: A82608
Included Lab Sample IDs: 1974741, 1974742, 1974743

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	101	P/P	85 - 115
Color (true)	98.0	99.0	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A82609
Included Lab Sample IDs: 1974741, 1974742, 1974743

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	100	P/P	95 - 105

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A82664
Included Lab Sample IDs: 1974747, 1974748, 1974749

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A82687
Included Lab Sample IDs: 1974744, 1974745, 1974746

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	99.5	P/P	90 - 110
NO2NO3-N	99.5	99.5	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A82710
Included Lab Sample IDs: 1974769, 1974770, 1974771, 1974772, 1974773, 1974774, 1974775, 1974776

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	84.4	90.5	P/P	60 - 150
Sucralose	86.5	84.4	P/P	60 - 150
Sucralose	90.5	84.0	P/P	60 - 150

Reference Method: EPA 8321B
Run ID: A82734
Included Lab Sample IDs: 1974769, 1974770, 1974771, 1974772, 1974773, 1974774, 1974775, 1974776

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	102	101	P/P	50 - 150
Acetaminophen	112	114	P/P	60 - 150
Acetaminophen	114	118	P/P	60 - 150
Acetaminophen	118	125	P/P	60 - 150
Bentazon	127	106	P/P	50 - 150
Carbamazepine	106	112	P/P	60 - 150
Carbamazepine	133	106	P/P	60 - 150
Carbamazepine	137	133	P/P	60 - 150
Diuron	115	119	P/P	60 - 150
Diuron	119	119	P/P	60 - 150
Diuron	119	108	P/P	60 - 150
Fenuron	111	114	P/P	60 - 150
Fenuron	114	117	P/P	60 - 150
Fenuron	114	114	P/P	60 - 150
Fluridone	117	121	P/P	60 - 160
Fluridone	120	117	P/P	60 - 160
Fluridone	121	115	P/P	60 - 160
Imazapyr	101	103	P/P	50 - 150
Imazapyr	103	91.9	P/P	50 - 150
Imazapyr	91.5	101	P/P	50 - 150
Imidacloprid	108	112	P/P	60 - 150
Imidacloprid	112	101	P/P	60 - 150
Imidacloprid	113	108	P/P	60 - 150
Linuron	105	110	P/P	60 - 150
Linuron	110	128	P/P	60 - 150
Linuron	128	122	P/P	60 - 150
MCPP	103	94.6	P/P	50 - 150

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A82734
Included Lab Sample IDs: 1974769, 1974770, 1974771, 1974772, 1974773, 1974774, 1974775, 1974776

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Primidone	102	123	P/P	60 - 150
Primidone	105	102	P/P	60 - 150
Primidone	98.1	105	P/P	60 - 150
Pyraclostrobin	117	121	P/P	60 - 150
Pyraclostrobin	118	119	P/P	60 - 150
Pyraclostrobin	119	117	P/P	60 - 150
Triclopyr	103	94.3	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A82747
Included Lab Sample IDs: 1974744, 1974745

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A82750
Included Lab Sample IDs: 1974741, 1974742, 1974743

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	97.7	100	P/P	90 - 110
Sulfate	97.2	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A82757
Included Lab Sample IDs: 1974744, 1974745, 1974746

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	92.6	96.3	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A82760
Included Lab Sample IDs: 1974741, 1974742, 1974743

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.4	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A82773
Included Lab Sample IDs: 1974746

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.8	99.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A82797
Included Lab Sample IDs: 1974744, 1974745

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A82811
Included Lab Sample IDs: 1974746

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.5	98.7	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A82826
Included Lab Sample IDs: 1974741, 1974742, 1974743

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

Reference Method: SM 5310 B-00
Run ID: A82844
Included Lab Sample IDs: 1974744, 1974745, 1974746

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.6	98.0	P/P	90 - 110
Organic Carbon	98.0	97.8	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A82852
Included Lab Sample IDs: 1974772, 1974773, 1974774, 1974775, 1974776

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	94.2	102	P/P	50 - 150
Bentazon	104	102	P/P	50 - 150
MCPP	101	101	P/P	50 - 150
Triclopyr	107	93.0	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
EPA 180.1 Rev. 2.0	Turbidity					0.105	
EPA 300.0 Rev. 2.1	Chloride	103	103	103		0.267	
	Sulfate	105	106	106		0.0839	
EPA 350.1 Rev. 2.0	Ammonia-N	90.1	93.1	93.9			0.758
	Ammonia-N	93.0	97.6	94.9			1.59
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.2	106	102			3.99
EPA 353.2 Rev. 2.0	NO2NO3-N	102	102				0.428
	NO2NO3-N	103	104	104			0.0
EPA 365.1 Rev. 2.0	Total-P	100	103	100			2.33
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.0	98.5	99.1			0.437
EPA 8321B	2,4-D	71.7	52.5	49.4			5.44
	2,4-D	79.8	56.1	48.2			15.1
	Acetaminophen	110	136	113			18.9
	Acetaminophen	113	128	118			8.26

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8321B	Bentazon	77.3	31.8	30.5			3.92
	Bentazon	77.1	31.5	28.3			10.7
	Carbamazepine	97.3	95.6	69.0			32.4
	Carbamazepine	94.6	85.2	106			22.1
	Diuron	66.7	65.1	57.5			12.4
	Diuron	69.0	66.4	72.7			9.14
	Fenuron	99.8	93.6	76.9			19.5
	Fenuron	107	98.8	108			8.63
	Fluridone	60.4	57.7	57.9			0.353
	Fluridone	69.1	58.0	65.4			12.0
	Imazapyr	67.2	62.5	57.5			8.29
	Imazapyr	74.4	68.7	70.3			2.35
	Imidacloprid	97.2	152	118			25.3
	Imidacloprid	98.7	135	114			16.2
	Linuron	71.7	85.7	72.0			17.4
	Linuron	84.6	87.3	84.3			3.52
	MCPP	63.3	37.0	35.0			5.56
	MCPP	79.4	44.6	40.0			10.8
	Primidone	103	110	93.0			17.1
	Primidone	99.9	100	101			0.686
	Pyraclostrobin	62.7	76.6	67.0			13.3
	Pyraclostrobin	65.0	73.5	75.5			2.70
	Sucralose	88.0	120	124			3.16
	Sucralose	108	112	96.1			14.7
	Triclopyr	67.1	40.4	41.3			2.36
	Triclopyr	79.1	44.8	43.6			2.60
SM 2120 B	Color (true)					2.17	
	Color (true)					1.08	
SM 2320 B-97	Total Alkalinity	100				2.13	
SM 2540 C-97	TDS					6.98	
	TDS					3.08	
SM 4500 F-C-97	Fluoride	97.3	95.0	96.5			1.42
SM 5310 B-00	Organic Carbon	98.6	98.6	100			1.55

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1974741, 1974742, 1974743
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1974741, 1974742, 1974743
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1974741, 1974742, 1974743
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1974744, 1974745, 1974746
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1974744, 1974745, 1974746
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1974744, 1974745, 1974746
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1974744, 1974745, 1974746
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1974747, 1974748, 1974749
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1974769, 1974770, 1974771, 1974772, 1974773, 1974774, 1974775, 1974776

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1974769, 1974770, 1974771, 1974772, 1974773, 1974774, 1974775, 1974776
SM 2120 B / E31780	True Color measured at 450 nm	1974741, 1974742, 1974743
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1974741, 1974742, 1974743
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1974741, 1974742, 1974743
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1974741, 1974742, 1974743
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1974741, 1974742, 1974743
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1974744, 1974745, 1974746

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	03/14/2018			03/14/2018 16:12	DeAsia Armster	1974741, 1974742, 1974743
EPA 300.0 Rev. 2.1	03/14/2018			03/21/2018	Julia Storbeck	1974741, 1974742, 1974743
EPA 350.1 Rev. 2.0	03/14/2018			03/22/2018	Ping Hua	1974744, 1974745
	03/14/2018			03/23/2018	Ping Hua	1974746
EPA 351.2 Rev. 2.0	03/14/2018	03/19/2018	Adrian Shelby	03/21/2018	Joseph Suarez	1974744, 1974745, 1974746
EPA 353.2 Rev. 2.0	03/14/2018			03/19/2018	Beverly Y. Sanders	1974744, 1974745, 1974746
EPA 365.1 Rev. 2.0	03/14/2018	03/19/2018	Sima Feizi	03/20/2018	Lipi Saha	1974744, 1974745
	03/14/2018	03/19/2018	Sima Feizi	03/21/2018	Lipi Saha	1974746
EPA 365.1 Rev. 2.0 dissolved	03/14/2018			03/16/2018 11:45	Megan Treadwell	1974749
	03/14/2018			03/16/2018 11:48	Megan Treadwell	1974747
	03/14/2018			03/16/2018 11:50	Megan Treadwell	1974748
EPA 8321B	03/14/2018	03/15/2018	Hoor Shaik	03/16/2018	Julie Michelle Frank	1974769, 1974770, 1974771
	03/14/2018	03/15/2018	Hoor Shaik	03/17/2018	Julie Michelle Frank	1974769, 1974770, 1974771
	03/14/2018	03/15/2018	Julie Michelle Frank	03/16/2018	Juyoung Kim	1974769, 1974770, 1974771
	03/14/2018	03/15/2018	Julie Michelle Frank	03/17/2018	Juyoung Kim	1974772, 1974773, 1974774, 1974775, 1974776
	03/14/2018	03/16/2018	Hoor Shaik	03/17/2018	Julie Michelle Frank	1974772, 1974773, 1974774, 1974775, 1974776
	03/14/2018	03/16/2018	Hoor Shaik	03/20/2018	Julie Michelle Frank	1974772, 1974773, 1974774, 1974775, 1974776
SM 2120 B	03/14/2018			03/14/2018 15:32	Tanya Welborn	1974742
	03/14/2018			03/14/2018 16:12	Tanya Welborn	1974741
	03/14/2018			03/14/2018 16:14	Tanya Welborn	1974743
SM 2320 B-97	03/14/2018			03/21/2018	Dale L. Simmons	1974741, 1974742, 1974743
SM 2540 C-97	03/14/2018			03/17/2018	Yijie Li	1974741, 1974742, 1974743
SM 2540 D-97	03/14/2018			03/17/2018	Yijie Li	1974741, 1974742, 1974743
SM 4500 F-C-97	03/14/2018			03/24/2018	Dale L. Simmons	1974741, 1974742, 1974743
SM 5310 B-00	03/14/2018			03/24/2018	Julia Storbeck	1974744, 1974745, 1974746