Chemical Analysis Report

SW-DIST-2018-11-14-01

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-2018-11-12-05**
Customer: **SW-DIST**
Project ID: **SMP**

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Date Certified: 30-NOV-2018 12:24

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 Creek @ Hopewell **Collection Date/Time: 11/13/2018 10:50**

Field ID: G2SW0026 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2041015	EPA 180.1 Rev. 2.0	Turbidity	7.0	A	NTU	P354699	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P355178	
		Sulfate	39		mg SO4/L	P355180	
	SM 2120 B	Color (true)	52		PCU	P354678	
	SM 2320 B-97	Total Alkalinity	54		mg CaCO3/L	P354960	
	SM 2540 C-97	TDS	166		mg/L	P354853	
	SM 2540 D-97	TSS	10		mg/L	P354866	
	SM 4500 F-C-97	Fluoride	0.38		mg F/L	P354962	
2041016	EPA 350.1 Rev. 2.0	Ammonia-N	0.11		mg N/L	P354939	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.7		mg N/L	P354803	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.4		mg N/L	P354820	
	EPA 365.1 Rev. 2.0	Total-P	0.88		mg P/L	P354829	
	SM 5310 B-00	Organic Carbon	9.7		mg C/L	P354837	
2041017	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.67		mg P/L	P354682	

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

Sample Location: Mustang Ranch Creek @ Hopewell **Collection Date/Time: 11/13/2018 10:50**

Field ID: G2SW0026 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2041046	EPA 8321B	2,4-D	0.0020	U	ug/L	P354661	
		Bentazon	8.0E-04	U	ug/L	P354661	
		MCPP	0.0020	U	ug/L	P354661	
		Triclopyr**	0.0040	U	ug/L	P354661	
		Imidacloprid	0.15		ug/L	P354661	MS
		Diuron	0.0061	I	ug/L	P354661	
		Pyraclostrobin**	0.0020	U	ug/L	P354661	
		Primidone**	0.0040	U	ug/L	P354661	
		Linuron	0.0040	U	ug/L	P354661	
		Acetaminophen**	0.0080	U	ug/L	P354661	
		Fenuron	0.016	U	ug/L	P354661	
		Imazapyr**	0.0040	U	ug/L	P354661	
		Carbamazepine**	8.0E-04	U	ug/L	P354661	
		Fluridone**	4.0E-04	U	ug/L	P354661	
		Hydrocodone**	8.0E-04	U	ug/L	P354661	
		Naproxen**	0.0080	U	ug/L	P354661	
		Ibuprofen**	0.020	U	ug/L	P354661	
		Sucralose**	0.051		ug/L	P354685	
		Acesulfame K**	0.10	U	ug/L	P354685	

Ref. Method and Comment:
EPA 8321B: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Mustang Rch @ CR 39 **Collection Date/Time: 11/13/2018 11:10**

Field ID: G2SW0050 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2041047	EPA 8321B	2,4-D	0.0020	U	ug/L	P354661	
		Bentazon	8.0E-04	U	ug/L	P354661	
		MCPP	0.0020	U	ug/L	P354661	
		Triclopyr**	0.0040	U	ug/L	P354661	
		Imidacloprid	0.14		ug/L	P354661	MS
		Diuron	0.0050	I	ug/L	P354661	
		Pyraclostrobin**	0.0020	U	ug/L	P354661	
		Primidone**	0.0040	U	ug/L	P354661	
		Linuron	0.0040	U	ug/L	P354661	
		Acetaminophen**	0.0080	U	ug/L	P354661	
		Fenuron	0.016	U	ug/L	P354661	
		Imazapyr**	0.0074	I	ug/L	P354661	
		Carbamazepine**	8.0E-04	U	ug/L	P354661	
		Fluridone**	4.0E-04	U	ug/L	P354661	
		Hydrocodone**	8.0E-04	U	ug/L	P354661	
		Naproxen**	0.0080	U	ug/L	P354661	
		Ibuprofen**	0.020	U	ug/L	P354661	
		Sucralose**	0.070		ug/L	P354685	
		Acesulfame K**	0.10	U	ug/L	P354685	

Ref. Method and Comment:
EPA 8321B: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Poley Creek @ SR 60 **Collection Date/Time: 11/13/2018 13:30**

Field ID: G2SW0049 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2041048	EPA 8321B	2,4-D	0.023		ug/L	P354661	
		Bentazon	0.015		ug/L	P354661	
		MCPP	0.0020	U	ug/L	P354661	
		Triclopyr**	0.0040	U	ug/L	P354661	
		Imidacloprid	0.035		ug/L	P354661	MS
		Diuron	0.0061	I	ug/L	P354661	
		Pyraclostrobin**	0.0020	U	ug/L	P354661	
		Primidone**	0.0040	U	ug/L	P354661	
		Linuron	0.0040	U	ug/L	P354661	
		Acetaminophen**	0.0080	U	ug/L	P354661	
		Fenuron	0.016	U	ug/L	P354661	
		Imazapyr**	0.087		ug/L	P354661	
		Carbamazepine**	0.0016	I	ug/L	P354661	
		Fluridone**	0.014		ug/L	P354661	
		Hydrocodone**	8.0E-04	U	ug/L	P354661	
		Naproxen**	0.0080	U	ug/L	P354661	
		Ibuprofen**	0.020	U	ug/L	P354661	
		Sucralose**	0.79		ug/L	P354685	
		Acesulfame K**	0.31	I	ug/L	P354685	

Ref. Method and Comment:
EPA 8321B: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Poley @ Shepard Rd **Collection Date/Time: 11/13/2018 13:50**

Field ID: G2SW0014 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2041049	EPA 8321B	2,4-D	0.026		ug/L	P354661	
		Bentazon	0.018		ug/L	P354661	
		MCPP	0.0020	U	ug/L	P354661	
		Triclopyr**	0.0040	U	ug/L	P354661	
		Imidacloprid	0.031		ug/L	P354661	MS
		Diuron	0.0060	I	ug/L	P354661	
		Pyraclostrobin**	0.0020	U	ug/L	P354661	
		Primidone**	0.0040	U	ug/L	P354661	
		Linuron	0.0040	U	ug/L	P354661	
		Acetaminophen**	0.0080	U	ug/L	P354661	
		Fenuron	0.016	U	ug/L	P354661	
		Imazapyr**	0.091		ug/L	P354661	
		Carbamazepine**	0.0021	I	ug/L	P354661	
		Fluridone**	0.015		ug/L	P354661	
		Hydrocodone**	8.0E-04	U	ug/L	P354661	
		Naproxen**	0.0080	U	ug/L	P354661	
		Ibuprofen**	0.020	U	ug/L	P354661	
		Sucralose**	0.88		ug/L	P354685	
		Acesulfame K**	0.34	I	ug/L	P354685	

Ref. Method and Comment:
EPA 8321B: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Turkey Creek @ Sydney Rd. **Collection Date/Time: 11/13/2018 09:40**

Field ID: G2SW0025 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2041050	EPA 8321B	2,4-D	0.0020	U	ug/L	P354661	
		Bentazon	8.0E-04	U	ug/L	P354661	
		MCPP	0.0020	U	ug/L	P354661	
		Triclopyr**	0.0040	U	ug/L	P354661	
		Imidacloprid	0.12		ug/L	P354661	MS
		Diuron	0.0020	U	ug/L	P354661	
		Pyraclostrobin**	0.0020	U	ug/L	P354661	
		Primidone**	0.0040	U	ug/L	P354661	
		Linuron	0.0040	U	ug/L	P354661	
		Acetaminophen**	0.0080	U	ug/L	P354661	
		Fenuron	0.016	U	ug/L	P354661	
		Imazapyr**	0.039		ug/L	P354661	
		Carbamazepine**	8.0E-04	U	ug/L	P354661	
		Fluridone**	0.0010	I	ug/L	P354661	
		Hydrocodone**	8.0E-04	U	ug/L	P354661	
		Naproxen**	0.0080	U	ug/L	P354661	
		Ibuprofen**	0.020	U	ug/L	P354661	
		Sucralose**	0.17		ug/L	P354685	
		Acesulfame K**	0.17	I	ug/L	P354685	

Ref. Method and Comment:
EPA 8321B: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Turkey Creek @ SR 60 **Collection Date/Time: 11/13/2018 10:10**

Field ID: G2SW0051 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2041051	EPA 8321B	2,4-D	0.021		ug/L	P354661	
		Bentazon	0.0090		ug/L	P354661	
		MCPP	0.020		ug/L	P354661	
		Triclopyr**	0.0040	U	ug/L	P354661	
		Imidacloprid	0.057		ug/L	P354661	MS
		Diuron	0.0028	I	ug/L	P354661	
		Pyraclostrobin**	0.0020	U	ug/L	P354661	
		Primidone**	0.029		ug/L	P354661	
		Linuron	0.0040	U	ug/L	P354661	
		Acetaminophen**	0.0080	U	ug/L	P354661	
		Fenuron	0.019	I	ug/L	P354661	
		Imazapyr**	0.15		ug/L	P354661	
		Carbamazepine**	0.020		ug/L	P354661	
		Fluridone**	0.0031		ug/L	P354661	
		Hydrocodone**	0.0044		ug/L	P354661	
		Naproxen**	0.0080	U	ug/L	P354661	
		Ibuprofen**	0.020	U	ug/L	P354661	
		Sucralose**	8.3		ug/L	P354685	
		Acesulfame K**	0.22	I	ug/L	P354685	

Ref. Method and Comment:
EPA 8321B: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: English Creek above SR 60 **Collection Date/Time: 11/13/2018 12:45**

Field ID: G2SW0006 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2041052	EPA 8321B	2,4-D	0.0029	I	ug/L	P354661	
		Bentazon	0.0041		ug/L	P354661	
		MCPP	0.0020	U	ug/L	P354661	
		Triclopyr**	0.0040	U	ug/L	P354661	
		Imidacloprid	0.017		ug/L	P354661	MS
		Diuron	0.0080	I	ug/L	P354661	
		Pyraclostrobin**	0.0020	U	ug/L	P354661	
		Primidone**	0.0040	U	ug/L	P354661	
		Linuron	0.0040	U	ug/L	P354661	
		Acetaminophen**	0.0080	U	ug/L	P354661	
		Fenuron	0.016	U	ug/L	P354661	
		Imazapyr**	0.10		ug/L	P354661	
		Carbamazepine**	0.0012	I	ug/L	P354661	
		Fluridone**	0.016		ug/L	P354661	
		Hydrocodone**	8.0E-04	U	ug/L	P354661	
		Naproxen**	0.0080	U	ug/L	P354661	
		Ibuprofen**	0.020	U	ug/L	P354661	
		Sucralose**	0.16		ug/L	P354685	
		Acesulfame K**	0.10	I	ug/L	P354685	

Ref. Method and Comment:
EPA 8321B: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: English Creek @ Old Mulberry Rd **Collection Date/Time: 11/13/2018 13:10**

Field ID: G2SW0048 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2041053	EPA 8321B	2,4-D	0.0045	I	ug/L	P354661	
		Bentazon	0.0071		ug/L	P354661	
		MCPP	0.0020	U	ug/L	P354661	
		Triclopyr**	0.0040	U	ug/L	P354661	
		Imidacloprid	0.014		ug/L	P354661	MS
		Diuron	0.0022	I	ug/L	P354661	
		Pyraclostrobin**	0.0020	U	ug/L	P354661	
		Primidone**	0.0040	U	ug/L	P354661	
		Linuron	0.0040	U	ug/L	P354661	
		Acetaminophen**	0.0080	U	ug/L	P354661	
		Fenuron	0.023	I	ug/L	P354661	
		Imazapyr**	0.13		ug/L	P354661	
		Carbamazepine**	0.0014	I	ug/L	P354661	
		Fluridone**	0.014		ug/L	P354661	
		Hydrocodone**	8.0E-04	U	ug/L	P354661	
		Naproxen**	0.0080	U	ug/L	P354661	
		Ibuprofen**	0.020	U	ug/L	P354661	
		Sucralose**	0.098		ug/L	P354685	
		Acesulfame K**	0.12	I	ug/L	P354685	

Ref. Method and Comment:
EPA 8321B: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Field Blank_11/13/2018 **Collection Date/Time: 11/13/2018 14:00**

Field ID: BLANK Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2041054	EPA 8321B	2,4-D	0.0020	U	ug/L	P354661	
		Bentazon	8.0E-04	U	ug/L	P354661	
		MCPP	0.0020	U	ug/L	P354661	
		Triclopyr**	0.0040	U	ug/L	P354661	
		Imidacloprid	0.0020	U	ug/L	P354661	MS
		Diuron	0.0020	U	ug/L	P354661	
		Pyraclostrobin**	0.0020	U	ug/L	P354661	
		Primidone**	0.0040	U	ug/L	P354661	
		Linuron	0.0040	U	ug/L	P354661	
		Acetaminophen**	0.0080	U	ug/L	P354661	
		Fenuron	0.016	U	ug/L	P354661	
		Imazapyr**	0.0040	U	ug/L	P354661	
		Carbamazepine**	8.0E-04	U	ug/L	P354661	
		Fluridone**	4.0E-04	U	ug/L	P354661	
		Hydrocodone**	8.0E-04	U	ug/L	P354661	
		Naproxen**	0.0080	U	ug/L	P354661	
		Ibuprofen**	0.020	U	ug/L	P354661	
		Sucralose**	0.010	U	ug/L	P354685	
		Acesulfame K**	0.10	U	ug/L	P354685	

Ref. Method and Comment:
EPA 8321B: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P354699

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355178

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355180

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354939

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354803

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P354820

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P354829

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P354682

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

Reference Method: EPA 8321B
Batch ID: P354661

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	8.0E-04	U	ug/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P354661

Component	Result	Code	Units
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	4.0E-04	U	ug/L
Hydrocodone	8.0E-04	U	ug/L
Ibuprofen	0.020	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
Naproxen	0.0080	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: P354685

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P354678

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P354960

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

Reference Method: SM 2540 C-97
Batch ID: P354853

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P354866

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P354962

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: P354837

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: P355178

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355180

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354939

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354803

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P354820

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P354829

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P354682

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

Reference Method: EPA 8321B
Batch ID: P354661

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	96.5		P	40 - 150
Acetaminophen	86.8		P	30 - 150
Bentazon	99.3		P	30 - 150
Carbamazepine	71.8		P	40 - 150
Diuron	67.5		P	40 - 150
Fenuron	105		P	40 - 150
Fluridone	99.2		P	40 - 150
Hydrocodone	108		P	40 - 150
Ibuprofen	75.3		P	40 - 150
Imazapyr	80.9		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P354661

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Imidacloprid	102		P	40 - 160
Linuron	64.5		P	40 - 150
MCPP	105		P	40 - 150
Naproxen	93.8		P	40 - 150
Primidone	78.8		P	40 - 150
Pyraclostrobin	58.9		P	40 - 150
Triclopyr	97.2		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P354685

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	92.2		P	40 - 150
Sucralose	113		P	40 - 150

Reference Method: SM 2120 B
Batch ID: P354678

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.5		P	90 - 110

Reference Method: SM 2320 B-97
Batch ID: P354960

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P354962

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.7		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P354837

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.1		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355178

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2039565	Chloride	99.2		P	90 - 110
2041072	Chloride	99.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355180

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2039565	Sulfate	97.4		P	90 - 110
2041072	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354939

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2041105	Ammonia-N	98.9	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354803

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2041080	Kjeldahl Nitrogen	102	99.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P354820

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2040971	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P354829

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2040992	Total-P	102	97.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P354682

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2040993	O-Phosphate-P	93.4	94.3	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P354661

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2041667	Acetaminophen	96.9	96.8	P/P	30 - 150
2041667	Bentazon	35.7	34.8	P/P	30 - 150
2041667	Carbamazepine	73.3	71.2	P/P	40 - 150
2041667	Diuron	50.2	59.7	P/P	40 - 150
2041667	Fenuron	92.3	89.3	P/P	40 - 150
2041667	Fluridone	97.2	105	P/P	40 - 150
2041667	Hydrocodone	114	130	P/P	40 - 150
2041667	Ibuprofen	72.2	76.4	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P354661

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2041667	Imazapyr	111	100	P/P	40 - 150
2041667	Imidacloprid	190	180	F/F	40 - 160
2041667	Linuron	61.1	60.0	P/P	40 - 150
2041667	MCPP	144	146	P/P	40 - 150
2041667	Naproxen	110	104	P/P	40 - 150
2041667	Primidone	91.7	98.4	P/P	40 - 150
2041667	Pyraclostrobin	64.6	56.5	P/P	40 - 150
2041667	Triclopyr	144	134	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P354685

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2041076	Acesulfame K	143	140	P/P	40 - 150
2041076	Sucralose	104	107	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P354962

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2040905	Fluoride	100	99.5	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P354837

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2040987	Organic Carbon	105	98.4	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P354699

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2041015	Turbidity	5.72	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355178

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2039565	Chloride	0.173	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355180

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2039565	Sulfate	0.855	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354939

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2041105	Ammonia-N	0.0407	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354803

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2041080	Kjeldahl Nitrogen	1.57	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P354820

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2040971	NO2NO3-N	0.491	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P354829

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2040992	Total-P	5.33	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P354682

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2040993	O-Phosphate-P	0.959	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P354661

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2041667	2,4-D	1.90	Spike	P	0 - 30
2041667	Acetaminophen	0.0403	Spike	P	0 - 30
2041667	Bentazon	2.67	Spike	P	0 - 30
2041667	Carbamazepine	2.92	Spike	P	0 - 30
2041667	Diuron	17.2	Spike	P	0 - 30
2041667	Fenuron	3.38	Spike	P	0 - 30
2041667	Fluridone	7.25	Spike	P	0 - 30
2041667	Hydrocodone	13.0	Spike	P	0 - 30
2041667	Ibuprofen	5.66	Spike	P	0 - 30
2041667	Imazapyr	10.1	Spike	P	0 - 30
2041667	Imidacloprid	5.29	Spike	P	0 - 30
2041667	Linuron	1.84	Spike	P	0 - 30
2041667	MCPP	1.32	Spike	P	0 - 30
2041667	Naproxen	5.63	Spike	P	0 - 30
2041667	Primidone	7.10	Spike	P	0 - 30
2041667	Pyraclostrobin	13.4	Spike	P	0 - 30
2041667	Triclopyr	7.30	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P354685

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2041076	Acesulfame K	1.58	Spike	P	0 - 30
2041076	Sucralose	2.73	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P354678

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2040969	Color (true)	1.22	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P354960

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2040905	Total Alkalinity	1.24	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P354853

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2040905	TDS	4.71	Sample	P	0 - 10

Quality Assurance Report
Precision

Reference Method: SM 4500 F-C-97
Batch ID: P354962

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2040905	Fluoride	0.473	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P354837

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2040987	Organic Carbon	4.21	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: 2041046
Field Sample ID: G2SW0026

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	129	P	30 - 160
EPA 8321B	Acetaminophen-d4	82.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	79.7	P	30 - 160
EPA 8321B	Diuron-d6	65.1	P	30 - 160
EPA 8321B	Endothall-d6	99.6	P	40 - 160
EPA 8321B	Ibuprofen-d3	104	P	30 - 160
EPA 8321B	Primidone-d5	96.9	P	30 - 160
EPA 8321B	Sucralose-d6	119	P	40 - 160

Lab Sample ID: 2041047
Field Sample ID: G2SW0050

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	96.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	66.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	70.6	P	30 - 160
EPA 8321B	Diuron-d6	64.5	P	30 - 160
EPA 8321B	Endothall-d6	102	P	40 - 160
EPA 8321B	Ibuprofen-d3	90.2	P	30 - 160
EPA 8321B	Primidone-d5	94.8	P	30 - 160
EPA 8321B	Sucralose-d6	128	P	40 - 160

Lab Sample ID: 2041048
Field Sample ID: G2SW0049

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	122	P	30 - 160
EPA 8321B	Acetaminophen-d4	70.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	69.4	P	30 - 160
EPA 8321B	Diuron-d6	53.7	P	30 - 160
EPA 8321B	Endothall-d6	102	P	40 - 160
EPA 8321B	Ibuprofen-d3	109	P	30 - 160
EPA 8321B	Primidone-d5	88.2	P	30 - 160
EPA 8321B	Sucralose-d6	129	P	40 - 160

Lab Sample ID: 2041049
Field Sample ID: G2SW0014

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	125	P	30 - 160
EPA 8321B	Acetaminophen-d4	80.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	69.8	P	30 - 160
EPA 8321B	Diuron-d6	60.0	P	30 - 160
EPA 8321B	Endothall-d6	103	P	40 - 160
EPA 8321B	Ibuprofen-d3	108	P	30 - 160
EPA 8321B	Primidone-d5	81.6	P	30 - 160
EPA 8321B	Sucralose-d6	126	P	40 - 160

Lab Sample ID: 2041050
Field Sample ID: G2SW0025

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits

Quality Assurance Report
Surrogates

Lab Sample ID: 2041050
Field Sample ID: G2SW0025

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	124	P	30 - 160
EPA 8321B	Acetaminophen-d4	77.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	66.1	P	30 - 160
EPA 8321B	Diuron-d6	61.8	P	30 - 160
EPA 8321B	Endothall-d6	104	P	40 - 160
EPA 8321B	Ibuprofen-d3	101	P	30 - 160
EPA 8321B	Primidone-d5	87.9	P	30 - 160
EPA 8321B	Sucralose-d6	122	P	40 - 160

Lab Sample ID: 2041051
Field Sample ID: G2SW0051

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	119	P	30 - 160
EPA 8321B	Acetaminophen-d4	72.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	69.9	P	30 - 160
EPA 8321B	Diuron-d6	52.0	P	30 - 160
EPA 8321B	Endothall-d6	103	P	40 - 160
EPA 8321B	Ibuprofen-d3	93.1	P	30 - 160
EPA 8321B	Primidone-d5	86.4	P	30 - 160
EPA 8321B	Sucralose-d6	121	P	40 - 160

Lab Sample ID: 2041052
Field Sample ID: G2SW0006

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	128	P	30 - 160
EPA 8321B	Acetaminophen-d4	69.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	59.3	P	30 - 160
EPA 8321B	Diuron-d6	65.9	P	30 - 160
EPA 8321B	Endothall-d6	107	P	40 - 160
EPA 8321B	Ibuprofen-d3	102	P	30 - 160
EPA 8321B	Primidone-d5	86.6	P	30 - 160
EPA 8321B	Sucralose-d6	128	P	40 - 160

Lab Sample ID: 2041053
Field Sample ID: G2SW0048

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	115	P	30 - 160
EPA 8321B	Acetaminophen-d4	88.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	73.0	P	30 - 160
EPA 8321B	Diuron-d6	65.0	P	30 - 160
EPA 8321B	Endothall-d6	109	P	40 - 160
EPA 8321B	Ibuprofen-d3	93.5	P	30 - 160
EPA 8321B	Primidone-d5	95.6	P	30 - 160
EPA 8321B	Sucralose-d6	127	P	40 - 160

Lab Sample ID: 2041054
Field Sample ID: BLANK

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits

Quality Assurance Report
Surrogates

Lab Sample ID: 2041054
Field Sample ID: BLANK

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	75.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	85.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	76.2	P	30 - 160
EPA 8321B	Diuron-d6	63.7	P	30 - 160
EPA 8321B	Endothall-d6	100	P	40 - 160
EPA 8321B	Ibuprofen-d3	95.0	P	30 - 160
EPA 8321B	Primidone-d5	50.0	P	30 - 160
EPA 8321B	Sucralose-d6	115	P	40 - 160

Quality Assurance Report
Calibration Verification

Reference Method: SM 2120 B
Run ID: A87755
Included Lab Sample IDs: 2041015

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A87756
Included Lab Sample IDs: 2041017

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	99.2	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A87763
Included Lab Sample IDs: 2041015

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	100	P/P	95 - 105

Reference Method: EPA 8321B
Run ID: A87802
Included Lab Sample IDs: 2041046, 2041047, 2041048, 2041049, 2041050, 2041051, 2041052, 2041053, 2041054

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	73.9	78.5	P/P	60 - 160
Acesulfame K	78.5	81.7	P/P	60 - 160
Acesulfame K	88.0	73.9	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A87823
Included Lab Sample IDs: 2041016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	100	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A87828
Included Lab Sample IDs: 2041016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.8	97.6	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A87832
Included Lab Sample IDs: 2041046, 2041047, 2041048, 2041049, 2041050, 2041051, 2041052, 2041053, 2041054

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	108	97.6	P/P	60 - 160
Sucralose	95.8	94.7	P/P	60 - 160
Sucralose	97.6	95.8	P/P	60 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A87853
Included Lab Sample IDs: 2041016

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

Reference Method: EPA 8321B
Run ID: A87856
Included Lab Sample IDs: 2041046, 2041047, 2041048, 2041049, 2041050, 2041051, 2041052, 2041053, 2041054

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	83.7	98.1	P/P	50 - 150
2,4-D	98.1	88.4	P/P	50 - 150
Acetaminophen	80.4	83.9	P/P	60 - 160
Acetaminophen	92.5	80.4	P/P	60 - 160
Bentazon	102	94.2	P/P	50 - 160
Bentazon	82.2	102	P/P	50 - 160
Carbamazepine	103	103	P/P	60 - 160
Carbamazepine	108	103	P/P	60 - 160
Diuron	100	98.4	P/P	60 - 150
Diuron	98.4	96.1	P/P	60 - 150
Fenuron	100	101	P/P	60 - 150
Fenuron	101	96.2	P/P	60 - 150
Fluridone	109	111	P/P	60 - 160
Fluridone	111	117	P/P	60 - 160
Hydrocodone	115	119	P/P	60 - 150
Hydrocodone	115	115	P/P	60 - 150
Ibuprofen	146	92.2	P/P	50 - 160
Ibuprofen	92.2	96.2	P/P	50 - 160
Imazapyr	84.0	88.9	P/P	50 - 150
Imazapyr	88.9	77.0	P/P	50 - 150
Imidacloprid	83.5	99.9	P/P	60 - 160
Imidacloprid	99.9	105	P/P	60 - 160
Linuron	93.0	98.1	P/P	60 - 150
Linuron	98.1	101	P/P	60 - 150
MCPP	88.1	89.1	P/P	50 - 150
MCPP	89.1	97.3	P/P	50 - 150
Naproxen	125	98.6	P/P	50 - 160
Naproxen	71.1	125	P/P	50 - 160
Primidone	108	102	P/P	60 - 160
Primidone	90.8	108	P/P	60 - 160
Pyraclostrobin	88.5	93.2	P/P	60 - 150
Pyraclostrobin	93.2	94.2	P/P	60 - 150
Triclopyr	91.2	90.2	P/P	50 - 160
Triclopyr	93.8	91.2	P/P	50 - 160

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A87871
Included Lab Sample IDs: 2041016

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

Quality Assurance Report
Calibration Verification

Reference Method: SM 2320 B-97
Run ID: A87886
Included Lab Sample IDs: 2041015

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.0	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A87886
Included Lab Sample IDs: 2041015

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A87890
Included Lab Sample IDs: 2041016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.1	96.3	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A87993
Included Lab Sample IDs: 2041015

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

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

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity					5.72	
EPA 300.0 Rev. 2.1	Chloride	103	99.2	99.1		0.173	
	Sulfate	103	97.4	101		0.855	
EPA 350.1 Rev. 2.0	Ammonia-N	98.5	98.9	98.8			0.0407
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.8	102	99.2			1.57
EPA 353.2 Rev. 2.0	NO2NO3-N	100	102	102			0.491
EPA 365.1 Rev. 2.0	Total-P	97.8	102	97.0			5.33
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.5	93.4	94.3			0.959
EPA 8321B	2,4-D	96.5					1.90
	Acesulfame K	92.2	143	140			1.58
	Acetaminophen	86.8	96.8	96.9			0.0403
	Bentazon	99.3	35.7	34.8			2.67
	Carbamazepine	71.8	71.2	73.3			2.92
	Diuron	67.5	59.7	50.2			17.2
	Fenuron	105	89.3	92.3			3.38
	Fluridone	99.2	105	97.2			7.25
	Hydrocodone	108	130	114			13.0
	Ibuprofen	75.3	72.2	76.4			5.66
	Imazapyr	80.9	111	100			10.1
	Imidacloprid	102	180	190			5.29
	Linuron	64.5	60.0	61.1			1.84
	MCPP	105	144	146			1.32
	Naproxen	93.8	110	104			5.63
	Primidone	78.8	98.4	91.7			7.10
	Pyraclostrobin	58.9	56.5	64.6			13.4
	Sucralose	113	104	107			2.73
	Triclopyr	97.2	144	134			7.30
SM 2120 B	Color (true)	99.5				1.22	
SM 2320 B-97	Total Alkalinity	101				1.24	
SM 2540 C-97	TDS					4.71	
SM 4500 F-C-97	Fluoride	97.7	100	99.5			0.473
SM 5310 B-00	Organic Carbon	97.1	105	98.4			4.21

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2041015
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2041015
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2041015
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2041016
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2041016
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2041016
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2041016
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2041017
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2041046, 2041047, 2041048, 2041049, 2041050, 2041051, 2041052, 2041053, 2041054

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 2120 B / E31780	True Color measured at 450 nm	2041015
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2041015
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2041015
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2041015
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2041015
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2041016

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	11/14/2018			11/14/2018 15:20	Megan Treadwell	2041015
EPA 300.0 Rev. 2.1	11/14/2018			11/28/2018 02:17	Lipi Saha	2041015
EPA 350.1 Rev. 2.0	11/14/2018			11/15/2018 12:09	Ping Hua	2041016
EPA 351.2 Rev. 2.0	11/14/2018	11/16/2018 11:30	Adrian Shelby	11/20/2018 09:39	Joseph Suarez	2041016
EPA 353.2 Rev. 2.0	11/14/2018			11/16/2018 13:23	Beverly Y. Sanders	2041016
EPA 365.1 Rev. 2.0	11/14/2018	11/16/2018 12:50	Sima Feizi	11/19/2018 10:08	Beverly Y. Sanders	2041016
EPA 365.1 Rev. 2.0 dissolved	11/14/2018			11/14/2018 16:59	Jhamieka S. Greenwood	2041017
EPA 8321B	11/14/2018	11/15/2018 08:00	Rebecca Ware	11/15/2018 12:41	Rebecca Ware	2041046
	11/14/2018	11/15/2018 08:00	Rebecca Ware	11/15/2018 13:08	Rebecca Ware	2041047
	11/14/2018	11/15/2018 08:00	Rebecca Ware	11/15/2018 13:22	Rebecca Ware	2041048
	11/14/2018	11/15/2018 08:00	Rebecca Ware	11/15/2018 13:36	Rebecca Ware	2041049
	11/14/2018	11/15/2018 08:00	Rebecca Ware	11/15/2018 13:49	Rebecca Ware	2041050
	11/14/2018	11/15/2018 08:00	Rebecca Ware	11/15/2018 14:03	Rebecca Ware	2041051
	11/14/2018	11/15/2018 08:00	Rebecca Ware	11/15/2018 14:17	Rebecca Ware	2041052
	11/14/2018	11/15/2018 08:00	Rebecca Ware	11/15/2018 14:44	Rebecca Ware	2041053
	11/14/2018	11/15/2018 08:00	Rebecca Ware	11/15/2018 14:58	Rebecca Ware	2041054
	11/14/2018	11/15/2018 08:00	Rebecca Ware	11/16/2018 15:26	Rebecca Ware	2041046
	11/14/2018	11/15/2018 08:00	Rebecca Ware	11/16/2018 15:53	Rebecca Ware	2041047
	11/14/2018	11/15/2018 08:00	Rebecca Ware	11/16/2018 16:07	Rebecca Ware	2041048
	11/14/2018	11/15/2018 08:00	Rebecca Ware	11/16/2018 16:21	Rebecca Ware	2041049
	11/14/2018	11/15/2018 08:00	Rebecca Ware	11/16/2018 16:35	Rebecca Ware	2041050
	11/14/2018	11/15/2018 08:00	Rebecca Ware	11/16/2018 16:48	Rebecca Ware	2041051
	11/14/2018	11/15/2018 08:00	Rebecca Ware	11/16/2018 17:02	Rebecca Ware	2041052
	11/14/2018	11/15/2018 08:00	Rebecca Ware	11/16/2018 17:30	Rebecca Ware	2041053
	11/14/2018	11/15/2018 08:00	Rebecca Ware	11/16/2018 17:43	Rebecca Ware	2041054
	11/14/2018	11/16/2018 10:00	Hoor Shaik	11/17/2018 04:49	Juyoung Kim	2041046
	11/14/2018	11/16/2018 10:00	Hoor Shaik	11/17/2018 05:24	Juyoung Kim	2041047
	11/14/2018	11/16/2018 10:00	Hoor Shaik	11/17/2018 05:58	Juyoung Kim	2041048
	11/14/2018	11/16/2018 10:00	Hoor Shaik	11/17/2018 07:07	Juyoung Kim	2041049
	11/14/2018	11/16/2018 10:00	Hoor Shaik	11/17/2018 07:42	Juyoung Kim	2041050
	11/14/2018	11/16/2018 10:00	Hoor Shaik	11/17/2018 08:17	Juyoung Kim	2041051
	11/14/2018	11/16/2018 10:00	Hoor Shaik	11/17/2018 08:51	Juyoung Kim	2041052
	11/14/2018	11/16/2018 10:00	Hoor Shaik	11/17/2018 09:26	Juyoung Kim	2041053
	11/14/2018	11/16/2018 10:00	Hoor Shaik	11/17/2018 10:00	Juyoung Kim	2041054
	11/14/2018	11/16/2018 10:00	Hoor Shaik	11/17/2018 22:07	Juyoung Kim	2041046
	11/14/2018	11/16/2018 10:00	Hoor Shaik	11/17/2018 22:42	Juyoung Kim	2041047
	11/14/2018	11/16/2018 10:00	Hoor Shaik	11/17/2018 23:16	Juyoung Kim	2041048
	11/14/2018	11/16/2018 10:00	Hoor Shaik	11/18/2018 00:26	Juyoung Kim	2041049
	11/14/2018	11/16/2018 10:00	Hoor Shaik	11/18/2018 01:00	Juyoung Kim	2041050
	11/14/2018	11/16/2018 10:00	Hoor Shaik	11/18/2018 01:35	Juyoung Kim	2041051

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	11/14/2018	11/16/2018 10:00	Hoor Shaik	11/18/2018 02:09	Juyoung Kim	2041052
	11/14/2018	11/16/2018 10:00	Hoor Shaik	11/18/2018 02:44	Juyoung Kim	2041053
	11/14/2018	11/16/2018 10:00	Hoor Shaik	11/18/2018 03:18	Juyoung Kim	2041054
SM 2120 B	11/14/2018			11/14/2018 16:27	Chelsea Hernandez	2041015
SM 2320 B-97	11/14/2018			11/16/2018 02:15	Dale L. Simmons	2041015
SM 2540 C-97	11/14/2018			11/15/2018 14:02	Yijie Li	2041015
SM 2540 D-97	11/14/2018			11/15/2018 14:02	Yijie Li	2041015
SM 4500 F-C-97	11/14/2018			11/16/2018 02:15	Dale L. Simmons	2041015
SM 5310 B-00	11/14/2018			11/15/2018 09:30	Megan Treadwell	2041016