

Chemical Analysis Report

NE-DIST-2019-02-05-01

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

Event Description: **GTM NERR-Guana River SMP = 7 sites**
Request ID: **RQ-2019-02-04-05**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd.
Tallahassee, FL 32399
Attn: Alicia Hogue

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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 21-FEB-2019 11:36

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first name.

Case Narrative

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

Results for the following analytical groups are included in this report: Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: DEPGR3

Collection Date/Time: 02/04/2019 09:47

Field ID: GTMGR3NUT

Matrix: W-BRACKISH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2059291	EPA 180.1 Rev. 2.0	Turbidity	3.0		NTU	P358357	
	SM 2320 B-97	Total Alkalinity	108		mg CaCO3/L	P359100	
	SM 2540 D-97	TSS	5	I	mg/L	P358950	
	SM 4500 F-C-97	Fluoride	0.92		mg F/L	P359104	
2059298	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P358641	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.36	I	mg N/L	P358406	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	I	mg N/L	P358485	
	EPA 365.1 Rev. 2.0	Total-P	0.041		mg P/L	P358432	
	SM 5310 B-00	Organic Carbon	6.2		mg C/L	P358670	
2059305	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.36	I	mg N/L	P358406	
2059333	EPA 8321B	2,4-D	0.0023	I	ug/L	P358179	
		Sucralose**	0.19		ug/L	P358574	
		Bentazon	0.0062		ug/L	P358179	
		MCP	0.0020	U	ug/L	P358179	
		Triclopyr**	0.0040	U	ug/L	P358179	
		Imidacloprid	0.0050	I	ug/L	P358179	
		Diuron	0.0020	U	ug/L	P358179	
		Pyraclostrobin**	0.0020	U	ug/L	P358179	
		Primidone**	0.0040	U	ug/L	P358179	
		Linuron	0.0040	U	ug/L	P358179	
		Acetaminophen**	0.0080	U	ug/L	P358179	
		Fenuron	0.016	U	ug/L	P358179	
		Imazapyr**	0.029		ug/L	P358179	
		Carbamazepine**	8.0E-04	U	ug/L	P358179	
		Fluridone**	0.0031	I	ug/L	P358179	
		Hydrocodone**	0.0020	U	ug/L	P358179	
		Naproxen**	0.0080	U	ug/L	P358179	
		Ibuprofen**	0.020	U	ug/L	P358179	

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: DEPGR2

Collection Date/Time: 02/04/2019 10:10

Field ID: GTMGRNUT

Matrix: W-BRACKISH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2059292	EPA 180.1 Rev. 2.0	Turbidity	4.0		NTU	P358357	
	SM 2320 B-97	Total Alkalinity	105		mg CaCO3/L	P359100	
	SM 2540 D-97	TSS	7	I	mg/L	P358950	
	SM 4500 F-C-97	Fluoride	0.83		mg F/L	P359104	
2059299	EPA 350.1 Rev. 2.0	Ammonia-N	0.030		mg N/L	P358641	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.41		mg N/L	P358406	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.012		mg N/L	P358485	
	EPA 365.1 Rev. 2.0	Total-P	0.044		mg P/L	P358432	
	SM 5310 B-00	Organic Carbon	7.9		mg C/L	P358670	
2059306	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.43		mg N/L	P358406	
2059334	EPA 8321B	2,4-D	0.0059	I	ug/L	P358179	
		Sucralose**	0.30		ug/L	P358574	
		Bentazon	0.0087		ug/L	P358179	
		MCP	0.0020	U	ug/L	P358179	
		Triclopyr**	0.0040	U	ug/L	P358179	
		Imidacloprid	0.0067	I	ug/L	P358179	
		Diuron	0.0020	U	ug/L	P358179	
		Pyraclostrobin**	0.0020	U	ug/L	P358179	
		Primidone**	0.0040	U	ug/L	P358179	
		Linuron	0.0040	U	ug/L	P358179	
		Acetaminophen**	0.0080	U	ug/L	P358179	
		Fenuron	0.016	U	ug/L	P358179	
		Imazapyr**	0.042		ug/L	P358179	
		Carbamazepine**	8.0E-04	U	ug/L	P358179	
		Fluridone**	0.0043		ug/L	P358179	
		Hydrocodone**	0.0020	U	ug/L	P358179	
		Naproxen**	0.0080	U	ug/L	P358179	
		Ibuprofen**	0.020	U	ug/L	P358179	

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: DEPGR1

Collection Date/Time: 02/04/2019 10:34

Field ID: GTMGR1NUT

Matrix: W-BRACKISH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2059293	EPA 180.1 Rev. 2.0	Turbidity	5.4		NTU	P358357	
	SM 2320 B-97	Total Alkalinity	108		mg CaCO3/L	P359100	
	SM 2540 D-97	TSS	7	IA	mg/L	P358950	
	SM 4500 F-C-97	Fluoride	0.76		mg F/L	P359104	
2059300	EPA 350.1 Rev. 2.0	Ammonia-N	0.055		mg N/L	P358641	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.50		mg N/L	P358406	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.011		mg N/L	P358485	
	EPA 365.1 Rev. 2.0	Total-P	0.053		mg P/L	P358432	
	SM 5310 B-00	Organic Carbon	8.7		mg C/L	P358670	
2059307	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.48		mg N/L	P358406	
2059335	EPA 8321B	2,4-D	0.0025	I	ug/L	P358179	
		Sucralose**	0.38		ug/L	P358574	
		Bentazon	0.0089		ug/L	P358179	
		MCP	0.0020	U	ug/L	P358179	
		Triclopyr**	0.0040	U	ug/L	P358179	
		Imidacloprid	0.0058	I	ug/L	P358179	
		Diuron	0.0020	U	ug/L	P358179	
		Pyraclostrobin**	0.0020	U	ug/L	P358179	
		Primidone**	0.0040	U	ug/L	P358179	
		Linuron	0.0040	U	ug/L	P358179	
		Acetaminophen**	0.0080	U	ug/L	P358179	
		Fenuron	0.016	U	ug/L	P358179	
		Imazapyr**	0.045		ug/L	P358179	
		Carbamazepine**	8.0E-04	U	ug/L	P358179	
		Fluridone**	0.0039		ug/L	P358179	
		Hydrocodone**	0.0020	U	ug/L	P358179	
		Naproxen**	0.0080	U	ug/L	P358179	
		Ibuprofen**	0.020	U	ug/L	P358179	

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: DEPGL4

Collection Date/Time: 02/04/2019 11:39

Field ID: GTMGL4NUT

Matrix: W-BRACKISH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2059294	EPA 180.1 Rev. 2.0	Turbidity	11		NTU	P358357	
	SM 2320 B-97	Total Alkalinity	102		mg CaCO3/L	P359100	
	SM 2540 D-97	TSS	14		mg/L	P358782	
	SM 4500 F-C-97	Fluoride	0.41		mg F/L	P359104	
2059301	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P358641	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.87		mg N/L	P358406	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P358485	
	EPA 365.1 Rev. 2.0	Total-P	0.043		mg P/L	P358432	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P359053	
2059308	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.71		mg N/L	P358406	
2059336	EPA 8321B	2,4-D	0.0020	U	ug/L	P358179	
		Sucralose**	0.69		ug/L	P358574	
		Bentazon	0.016		ug/L	P358179	
		MCP	0.0020	U	ug/L	P358179	
		Triclopyr**	0.0040	U	ug/L	P358179	
		Imidacloprid	0.0020	U	ug/L	P358179	
		Diuron	0.0020	U	ug/L	P358179	
		Pyraclostrobin**	0.0020	U	ug/L	P358179	
		Primidone**	0.0040	U	ug/L	P358179	
		Linuron	0.0040	U	ug/L	P358179	
		Acetaminophen**	0.0080	U	ug/L	P358179	
		Fenuron	0.016	U	ug/L	P358179	
		Imazapyr**	0.049		ug/L	P358179	
		Carbamazepine**	8.0E-04	U	ug/L	P358179	
		Fluridone**	0.0057		ug/L	P358179	
		Hydrocodone**	0.0020	U	ug/L	P358179	
		Naproxen**	0.0080	U	ug/L	P358179	
		Ibuprofen**	0.020	U	ug/L	P358179	

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: DEPL3

Collection Date/Time: 02/04/2019 12:00

Field ID: GTMLMUT

Matrix: W-BRACKISH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2059295	EPA 180.1 Rev. 2.0	Turbidity	25	A	NTU	P358357	
	SM 2320 B-97	Total Alkalinity	105		mg CaCO3/L	P358653	
	SM 2540 D-97	TSS	36		mg/L	P358782	
	SM 4500 F-C-97	Fluoride	0.29		mg F/L	P358658	
2059302	EPA 350.1 Rev. 2.0	Ammonia-N	0.014		mg N/L	P358641	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P358406	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.030		mg N/L	P358485	
	EPA 365.1 Rev. 2.0	Total-P	0.058		mg P/L	P358432	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P359053	
2059309	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.99		mg N/L	P358406	
2059337	EPA 8321B	2,4-D	0.0020	U	ug/L	P358179	
		Sucralose**	1.2		ug/L	P358574	
		Bentazon	0.025		ug/L	P358179	
		MCP	0.0020	U	ug/L	P358179	
		Triclopyr**	0.0040	U	ug/L	P358179	
		Imidacloprid	0.0020	U	ug/L	P358179	
		Diuron	0.0020	U	ug/L	P358179	
		Pyraclostrobin**	0.0020	U	ug/L	P358179	
		Primidone**	0.0040	U	ug/L	P358179	
		Linuron	0.0040	U	ug/L	P358179	
		Acetaminophen**	0.0080	U	ug/L	P358179	
		Fenuron	0.016	U	ug/L	P358179	
		Imazapyr**	0.056		ug/L	P358179	
		Carbamazepine**	8.0E-04	U	ug/L	P358179	
		Fluridone**	0.011		ug/L	P358179	
		Hydrocodone**	0.0020	U	ug/L	P358179	
		Naproxen**	0.0080	U	ug/L	P358179	
		Ibuprofen**	0.020	U	ug/L	P358179	

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: DEPL2

Collection Date/Time: 02/04/2019 12:24

Field ID: GTMGL2NUT

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2059296	EPA 180.1 Rev. 2.0	Turbidity	16		NTU	P358357	
	SM 2320 B-97	Total Alkalinity	112		mg CaCO3/L	P358653	
	SM 2540 D-97	TSS	17		mg/L	P358782	
	SM 4500 F-C-97	Fluoride	0.21		mg F/L	P358658	
2059303	EPA 350.1 Rev. 2.0	Ammonia-N	0.062		mg N/L	P358640	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P358693	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.024		mg N/L	P358421	
	EPA 365.1 Rev. 2.0	Total-P	0.056		mg P/L	P358428	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P359053	
2059310	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	1.0		mg N/L	P358693	
2059338	EPA 8321B	2,4-D	0.0024	I	ug/L	P358179	
		Sucralose**	1.5		ug/L	P358574	
		Bentazon	0.038		ug/L	P358179	
		MCP	0.0020	U	ug/L	P358179	
		Triclopyr**	0.0040	U	ug/L	P358179	
		Imidacloprid	0.0027	I	ug/L	P358179	
		Diuron	0.0020	U	ug/L	P358179	
		Pyraclostrobin**	0.0020	U	ug/L	P358179	
		Primidone**	0.0040	I	ug/L	P358179	
		Linuron	0.0040	U	ug/L	P358179	
		Acetaminophen**	0.0080	U	ug/L	P358179	
		Fenuron	0.016	U	ug/L	P358179	
		Imazapyr**	0.060		ug/L	P358179	
		Carbamazepine**	8.0E-04	U	ug/L	P358179	
		Fluridone**	0.024		ug/L	P358179	
		Hydrocodone**	0.0020	U	ug/L	P358179	
		Naproxen**	0.0080	U	ug/L	P358179	
		Ibuprofen**	0.020	U	ug/L	P358179	

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: DEPGL1

Collection Date/Time: 02/04/2019 12:53

Field ID: GTMGL1NUT

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2059297	EPA 180.1 Rev. 2.0	Turbidity	0.70		NTU	P358358	
	SM 2320 B-97	Total Alkalinity	119		mg CaCO3/L	P358653	
	SM 2540 D-97	TSS	2	I	mg/L	P358782	
	SM 4500 F-C-97	Fluoride	0.18		mg F/L	P358658	
2059304	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P358642	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.73		mg N/L	P358404	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.005	I	mg N/L	P358421	
	EPA 365.1 Rev. 2.0	Total-P	0.092		mg P/L	P358428	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P359053	
2059311	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.83		mg N/L	P358404	
2059339	EPA 8321B	2,4-D	0.0096		ug/L	P358394	
		Sucralose**	2.1		ug/L	P358574	
		Bentazon	0.075		ug/L	P358394	
		MCP	0.0020	U	ug/L	P358394	
		Triclopyr**	0.0040	U	ug/L	P358394	
		Imidacloprid	0.0097	J	ug/L	P358394	MS
		Diuron	0.0028	I	ug/L	P358394	
		Pyraclostrobin**	0.0020	U	ug/L	P358394	
		Primidone**	0.0063	I	ug/L	P358394	
		Linuron	0.0040	U	ug/L	P358394	
		Acetaminophen**	0.0080	U	ug/L	P358394	
		Fenuron	0.016	U	ug/L	P358394	
		Imazapyr**	0.067		ug/L	P358394	
		Carbamazepine**	9.6E-04	I	ug/L	P358394	
		Fluridone**	0.065		ug/L	P358394	
		Hydrocodone**	0.0020	U	ug/L	P358394	
		Naproxen**	0.0080	U	ug/L	P358394	
		Ibuprofen**	0.020	U	ug/L	P358394	

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: Refer to the narrative for an explanation of QC Codes.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P358357

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P358358

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P358640

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P358641

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P358642

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P358404

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P358406

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P358693

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P358404

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P358406

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P358693

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P358421

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P358485

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P358428

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P358432

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

Reference Method: EPA 8321B
Batch ID: P358179

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
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P358179

Component	Result	Code	Units
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P358394

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
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	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
MCP	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: P358574

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2320 B-97
Batch ID: P358653

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

Reference Method: SM 2320 B-97
Batch ID: P359100

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

Reference Method: SM 2540 D-97
Batch ID: P358782

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P358950

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P358950

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P358658

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P359104

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P358670

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

Reference Method: SM 5310 B-00
Batch ID: P359053

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P358640

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P358641

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P358642

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.3		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P358404

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P358406

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P358693

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P358404

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P358406

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P358693

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P358421

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P358485

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: P358428

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P358432

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

Reference Method: EPA 8321B
Batch ID: P358179

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	89.7		P	40 - 150
Acetaminophen	101		P	30 - 150
Bentazon	86.8		P	30 - 150
Carbamazepine	95.7		P	40 - 150
Diuron	70.5		P	40 - 150
Fenuron	124		P	40 - 150
Fluridone	102		P	40 - 150
Hydrocodone	112		P	40 - 150
Ibuprofen	91.2		P	40 - 150
Imazapyr	101		P	40 - 150
Imidacloprid	105		P	40 - 160
Linuron	69.9		P	40 - 150
MCP	128		P	40 - 150
Naproxen	53.2		P	40 - 150
Primidone	92.8		P	40 - 150
Pyraclostrobin	50.9		P	40 - 150
Triclopyr	76.8		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P358394

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	87.2		P	40 - 150
Acetaminophen	89.9		P	30 - 150
Bentazon	98.3		P	30 - 150
Carbamazepine	88.5		P	40 - 150
Diuron	78.2		P	40 - 150
Fenuron	117		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P358394

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluridone	104		P	40 - 150
Hydrocodone	98.7		P	40 - 150
Ibuprofen	85.3		P	40 - 150
Imazapyr	92.7		P	40 - 150
Imidacloprid	94.4		P	40 - 150
Linuron	77.0		P	40 - 150
MCPP	115		P	40 - 150
Naproxen	95.6		P	40 - 150
Primidone	95.5		P	40 - 150
Pyraclostrobin	65.5		P	40 - 150
Triclopyr	75.5		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P358574

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	80.6		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P358653

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 107

Reference Method: SM 2320 B-97
Batch ID: P359100

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P358658

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

Reference Method: SM 4500 F-C-97
Batch ID: P359104

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

Reference Method: SM 5310 B-00
Batch ID: P358670

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.8		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P359053

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
Batch ID: P359053

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P358640

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2059132	Ammonia-N	101	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P358641

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2059298	Ammonia-N	99.6	99.3	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P358642

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2059304	Ammonia-N	102	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P358404

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2059310	Kjeldahl Nitrogen	99.2	99.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P358406

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2059305	Kjeldahl Nitrogen	106	106	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P358693

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2060055	Kjeldahl Nitrogen	91.1	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P358404

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2059310	Kjeldahl Nitrogen	99.2	99.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P358406

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2059305	Kjeldahl Nitrogen	106	106	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P358693

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2060055	Kjeldahl Nitrogen	91.1	100	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P358421

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2059263	NO2NO3-N	99.6	96.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P358485

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2059298	NO2NO3-N	99.5	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P358428

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2059132	Total-P	106	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P358432

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2059298	Total-P	95.0	95.7	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P358179

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2058649	2,4-D	91.0	101	P/P	40 - 150
2058649	Acetaminophen	93.7	94.8	P/P	30 - 150
2058649	Bentazon	37.1	32.9	P/P	30 - 150
2058649	Carbamazepine	73.4	74.9	P/P	40 - 150
2058649	Diuron	58.2	50.9	P/P	40 - 150
2058649	Fenuron	80.7	87.4	P/P	40 - 150
2058649	Fluridone	85.8	82.8	P/P	40 - 150
2058649	Hydrocodone	97.9	102	P/P	40 - 150
2058649	Ibuprofen	87.6	82.4	P/P	40 - 150
2058649	Imazapyr	109	98.1	P/P	40 - 150
2058649	Imidacloprid	140	150	P/P	40 - 160
2058649	Linuron	55.6	52.8	P/P	40 - 150
2058649	MCP	121	121	P/P	40 - 150
2058649	Naproxen	70.3	65.7	P/P	40 - 150
2058649	Primidone	101	99.2	P/P	40 - 150
2058649	Pyraclostrobin	65.0	54.8	P/P	40 - 150
2058649	Triclopyr	79.8	77.6	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P358394

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2059339	2,4-D	102	97.0	P/P	40 - 150
2059339	Acetaminophen	132	127	P/P	30 - 150
2059339	Bentazon	65.4	54.1	P/P	30 - 150
2059339	Carbamazepine	81.6	68.4	P/P	40 - 150
2059339	Diuron	71.1	60.3	P/P	40 - 150
2059339	Fenuron	87.8	77.7	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P358394

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2059339	Fluridone	95.1	74.8	P/P	40 - 150
2059339	Hydrocodone	95.5	82.4	P/P	40 - 150
2059339	Ibuprofen	94.3	91.2	P/P	40 - 150
2059339	Imazapyr	100	88.8	P/P	40 - 150
2059339	Imidacloprid	192	175	F/F	40 - 150
2059339	Linuron	73.9	62.8	P/P	40 - 150
2059339	MCPP	145	121	P/P	40 - 150
2059339	Naproxen	101	99.2	P/P	40 - 150
2059339	Primidone	101	100	P/P	40 - 150
2059339	Pyraclostrobin	83.3	69.9	P/P	40 - 150
2059339	Triclopyr	86.2	77.7	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P358574

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061097	Sucralose	109	87.6	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P358658

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2059069	Fluoride	97.5	96.9	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P359104

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061232	Fluoride	96.9	96.2	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P358670

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2060038	Organic Carbon	98.5	97.4	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P359053

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2059301	Organic Carbon	98.9	97.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P358357

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2059295	Turbidity	8.55	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P358358

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2059347	Turbidity	9.52	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P358640

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2059132	Ammonia-N	2.03	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P358641

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2059298	Ammonia-N	0.232	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P358642

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2059304	Ammonia-N	0.0335	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P358404

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2059310	Kjeldahl Nitrogen	0.253	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P358406

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2059305	Kjeldahl Nitrogen	0.179	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P358693

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2060055	Kjeldahl Nitrogen	4.55	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P358404

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2059310	Kjeldahl Nitrogen	0.253	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P358406

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2059305	Kjeldahl Nitrogen	0.179	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P358693

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2060055	Kjeldahl Nitrogen	4.55	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P358421

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2059263	NO2NO3-N	3.15	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P358485

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2059298	NO2NO3-N	0.484	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P358428

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2059132	Total-P	0.576	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P358432

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2059298	Total-P	0.699	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P358179

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2058649	2,4-D	9.79	Spike	P	0 - 30
2058649	Acetaminophen	0.953	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P358179

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2058649	Bentazon	1.92	Spike	P	0 - 30
2058649	Carbamazepine	2.09	Spike	P	0 - 30
2058649	Diuron	12.3	Spike	P	0 - 30
2058649	Fenuron	8.01	Spike	P	0 - 30
2058649	Fluridone	2.37	Spike	P	0 - 30
2058649	Hydrocodone	4.19	Spike	P	0 - 30
2058649	Ibuprofen	6.11	Spike	P	0 - 30
2058649	Imazapyr	4.09	Spike	P	0 - 30
2058649	Imidacloprid	5.89	Spike	P	0 - 30
2058649	Linuron	5.19	Spike	P	0 - 30
2058649	MCP	0.337	Spike	P	0 - 30
2058649	Naproxen	6.74	Spike	P	0 - 30
2058649	Primidone	2.08	Spike	P	0 - 30
2058649	Pyraclostrobin	17.1	Spike	P	0 - 30
2058649	Triclopyr	2.87	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P358394

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2059339	2,4-D	4.22	Spike	P	0 - 30
2059339	Acetaminophen	3.76	Spike	P	0 - 30
2059339	Bentazon	2.58	Spike	P	0 - 30
2059339	Carbamazepine	16.5	Spike	P	0 - 30
2059339	Diuron	15.7	Spike	P	0 - 30
2059339	Fenuron	12.2	Spike	P	0 - 30
2059339	Fluridone	4.94	Spike	P	0 - 30
2059339	Hydrocodone	14.7	Spike	P	0 - 30
2059339	Ibuprofen	3.34	Spike	P	0 - 30
2059339	Imazapyr	6.29	Spike	P	0 - 30
2059339	Imidacloprid	9.05	Spike	P	0 - 30
2059339	Linuron	16.2	Spike	P	0 - 30
2059339	MCP	18.0	Spike	P	0 - 30
2059339	Naproxen	1.31	Spike	P	0 - 30
2059339	Primidone	0.471	Spike	P	0 - 30
2059339	Pyraclostrobin	17.6	Spike	P	0 - 30
2059339	Triclopyr	10.4	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P358574

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061097	Sucralose	21.3	Spike	P	0 - 30

Reference Method: SM 2320 B-97
Batch ID: P358653

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: SM 2320 B-97
Batch ID: P358653

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2059069	Total Alkalinity	0.0253	Sample	P	0 - 1.6

Reference Method: SM 2320 B-97
Batch ID: P359100

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061232	Total Alkalinity	0.248	Sample	P	0 - 1.6

Reference Method: SM 4500 F-C-97
Batch ID: P358658

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2059069	Fluoride	0.480	Spike	P	0 - 3.5

Reference Method: SM 4500 F-C-97
Batch ID: P359104

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061232	Fluoride	0.473	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P358670

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2060038	Organic Carbon	0.837	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P359053

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2059301	Organic Carbon	0.695	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: 2059333
Field Sample ID: GTMGR3NUT

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	87.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	96.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	78.6	P	30 - 160
EPA 8321B	Diuron-d6	68.7	P	30 - 160
EPA 8321B	Ibuprofen-d3	89.2	P	30 - 160
EPA 8321B	Primidone-d5	95.1	P	30 - 160
EPA 8321B	Sucralose-d6	85.0	P	40 - 160

Lab Sample ID: 2059334
Field Sample ID: GTMGRNUT

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	79.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	97.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	81.1	P	30 - 160
EPA 8321B	Diuron-d6	69.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	123	P	30 - 160
EPA 8321B	Primidone-d5	86.9	P	30 - 160
EPA 8321B	Sucralose-d6	96.4	P	40 - 160

Lab Sample ID: 2059335
Field Sample ID: GTMGR1NUT

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	73.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	91.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	62.8	P	30 - 160
EPA 8321B	Diuron-d6	65.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	84.0	P	30 - 160
EPA 8321B	Primidone-d5	91.2	P	30 - 160
EPA 8321B	Sucralose-d6	101	P	40 - 160

Lab Sample ID: 2059336
Field Sample ID: GTMGL4NUT

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	77.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	84.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	63.0	P	30 - 160
EPA 8321B	Diuron-d6	51.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	80.6	P	30 - 160
EPA 8321B	Primidone-d5	73.3	P	30 - 160
EPA 8321B	Sucralose-d6	94.3	P	40 - 160

Lab Sample ID: 2059337
Field Sample ID: GTMLMNUT

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	91.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	92.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	70.3	P	30 - 160
EPA 8321B	Diuron-d6	63.7	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2059337

Field Sample ID: GTMLMNUT

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Ibuprofen-d3	98.2	P	30 - 160
EPA 8321B	Primidone-d5	79.9	P	30 - 160
EPA 8321B	Sucralose-d6	106	P	40 - 160

Lab Sample ID: 2059338

Field Sample ID: GTMGL2NUT

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	61.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	88.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	57.9	P	30 - 160
EPA 8321B	Diuron-d6	60.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	81.1	P	30 - 160
EPA 8321B	Primidone-d5	69.9	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	40 - 160

Lab Sample ID: 2059339

Field Sample ID: GTMGL1NUT

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	74.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	118	P	30 - 160
EPA 8321B	Carbamazepine-d10	75.8	P	30 - 160
EPA 8321B	Diuron-d6	74.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	80.8	P	30 - 160
EPA 8321B	Primidone-d5	90.5	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A89202

Included Lab Sample IDs: 2059291, 2059292, 2059293, 2059294, 2059295, 2059296, 2059297

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	102	101	P/P	95 - 105
Turbidity	99.5	102	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A89215

Included Lab Sample IDs: 2059303, 2059304

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A89237

Included Lab Sample IDs: 2059303, 2059304

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A89247

Included Lab Sample IDs: 2059298, 2059299, 2059300, 2059301, 2059302

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.5	99.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A89256

Included Lab Sample IDs: 2059298, 2059299, 2059300, 2059301, 2059302, 2059304

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.5	96.8	P/P	90 - 110
Kjeldahl Nitrogen	96.8	99.2	P/P	90 - 110
Kjeldahl Nitrogen	99.2	94.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved

Run ID: A89256

Included Lab Sample IDs: 2059305, 2059306, 2059307, 2059308, 2059309, 2059311

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.8	99.2	P/P	90 - 110
Kjeldahl Nitrogen	99.2	94.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A89260

Included Lab Sample IDs: 2059298, 2059299, 2059300, 2059301, 2059302

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A89286

Included Lab Sample IDs: 2059333, 2059334, 2059335, 2059336, 2059337, 2059338

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	79.7	81.6	P/P	50 - 150
Acetaminophen	87.6	101	P/P	60 - 160
Bentazon	104	97.7	P/P	50 - 160
Carbamazepine	95.8	90.9	P/P	60 - 150
Diuron	87.5	88.0	P/P	60 - 150
Fenuron	92.6	93.2	P/P	60 - 150
Fluridone	98.1	97.0	P/P	60 - 160
Hydrocodone	88.1	81.0	P/P	60 - 150
Ibuprofen	84.9	72.6	P/P	50 - 160
Imazapyr	88.1	78.9	P/P	50 - 150
Imidacloprid	85.4	82.7	P/P	60 - 150
Linuron	97.1	95.8	P/P	60 - 150
MCPP	87.5	83.8	P/P	50 - 150
Naproxen	82.5	92.2	P/P	50 - 160
Primidone	86.0	94.7	P/P	60 - 150
Pyraclostrobin	94.1	94.4	P/P	60 - 150
Triclopyr	88.7	89.8	P/P	50 - 150

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A89313

Included Lab Sample IDs: 2059298, 2059299, 2059300, 2059301, 2059302, 2059303, 2059304

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

Reference Method: SM 2320 B-97

Run ID: A89314

Included Lab Sample IDs: 2059295, 2059296, 2059297

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	106	P/P	90 - 110
Total Alkalinity	106	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A89314

Included Lab Sample IDs: 2059295, 2059296, 2059297

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	99.5	P/P	90 - 110
Fluoride	99.5	101	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A89320

Included Lab Sample IDs: 2059298, 2059299, 2059300

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.0	98.6	P/P	90 - 110
Organic Carbon	98.7	97.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A89363

Included Lab Sample IDs: 2059303

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved

Run ID: A89363

Included Lab Sample IDs: 2059310

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

Reference Method: EPA 8321B

Run ID: A89461

Included Lab Sample IDs: 2059333, 2059334, 2059335, 2059336, 2059337, 2059338, 2059339

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	104	105	P/P	60 - 160
Sucralose	90.0	104	P/P	60 - 160

Reference Method: SM 5310 B-00

Run ID: A89466

Included Lab Sample IDs: 2059301, 2059302, 2059303, 2059304

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.8	96.4	P/P	90 - 110
Organic Carbon	96.6	95.8	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A89482

Included Lab Sample IDs: 2059291, 2059292, 2059293, 2059294

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	103	P/P	90 - 110
Total Alkalinity	103	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A89482

Included Lab Sample IDs: 2059291, 2059292, 2059293, 2059294

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.5	98.1	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A89502

Included Lab Sample IDs: 2059339

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	150	70.7	P/P	50 - 150
Acetaminophen	126	113	P/P	60 - 160
Bentazon	97.6	88.4	P/P	50 - 160
Carbamazepine	95.6	98.8	P/P	60 - 150
Diuron	106	98.1	P/P	60 - 150
Fenuron	95.1	92.8	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A89502

Included Lab Sample IDs: 2059339

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluridone	101	102	P/P	60 - 160
Hydrocodone	112	108	P/P	60 - 150
Ibuprofen	122	113	P/P	50 - 160
Imazapyr	89.2	78.0	P/P	50 - 150
Imidacloprid	121	120	P/P	60 - 150
Linuron	75.4	97.3	P/P	60 - 150
MCPP	88.3	93.3	P/P	50 - 150
Naproxen	91.9	128	P/P	50 - 160
Primidone	96.9	90.4	P/P	60 - 150
Pyraclostrobin	114	111	P/P	60 - 150
Triclopyr	83.5	106	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	MS
						SMP	
EPA 180.1 Rev. 2.0	Turbidity					8.55	
	Turbidity					9.52	
EPA 350.1 Rev. 2.0	Ammonia-N	97.6	101	103			2.03
	Ammonia-N	98.5	99.6	99.3			0.232
	Ammonia-N	97.3	102	102			0.0335
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	99.2	99.7			0.253
	Kjeldahl Nitrogen	103	106	106			0.179
	Kjeldahl Nitrogen	103	91.1	100			4.55
EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	101	99.2	99.7			0.253
	Kjeldahl Nitrogen	103	106	106			0.179
	Kjeldahl Nitrogen	103	91.1	100			4.55
EPA 353.2 Rev. 2.0	NO2NO3-N	101	99.6	96.1			3.15
	NO2NO3-N	100	99.5	99.0			0.484
EPA 365.1 Rev. 2.0	Total-P	105	106	105			0.576
	Total-P	105	95.0	95.7			0.699
EPA 8321B	2,4-D	89.7	91.0	101			9.79
	2,4-D	87.2	102	97.0			4.22
	Acetaminophen	101	93.7	94.8			0.953
	Acetaminophen	89.9	132	127			3.76
	Bentazon	86.8	37.1	32.9			1.92
	Bentazon	98.3	65.4	54.1			2.58
	Carbamazepine	95.7	73.4	74.9			2.09
	Carbamazepine	88.5	81.6	68.4			16.5
	Diuron	70.5	58.2	50.9			12.3
	Diuron	78.2	71.1	60.3			15.7
	Fenuron	124	80.7	87.4			8.01
	Fenuron	117	87.8	77.7			12.2
	Fluridone	102	85.8	82.8			2.37
	Fluridone	104	95.1	74.8			4.94
	Hydrocodone	112	97.9	102			4.19
	Hydrocodone	98.7	95.5	82.4			14.7
	Ibuprofen	91.2	87.6	82.4			6.11
	Ibuprofen	85.3	94.3	91.2			3.34
	Imazapyr	101	109	98.1			4.09
	Imazapyr	92.7	100	88.8			6.29
	Imidacloprid	105	140	150			5.89
	Imidacloprid	94.4	192	175			9.05
	Linuron	69.9	55.6	52.8			5.19
	Linuron	77.0	73.9	62.8			16.2
	MCP	128	121	121			0.337
	MCP	115	145	121			18.0
	Naproxen	53.2	70.3	65.7			6.74
	Naproxen	95.6	101	99.2			1.31
	Primidone	92.8	101	99.2			2.08
	Primidone	95.5	101	100			0.471
	Pyraclostrobin	50.9	65.0	54.8			17.1
	Pyraclostrobin	65.5	83.3	69.9			17.6
	Sucralose	80.6	109	87.6			21.3
	Triclopyr	76.8	79.8	77.6			2.87
	Triclopyr	75.5	86.2	77.7			10.4
SM 2320 B-97	Total Alkalinity	104				0.0253	
	Total Alkalinity	104				0.248	
SM 4500 F-C-97	Fluoride	97.3	97.5	96.9			0.480
	Fluoride	97.3	96.9	96.2			0.473

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
SM 5310 B-00	Organic Carbon	99.8	98.5	97.4		0.837
	Organic Carbon	100	98.9	97.8		0.695

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2059291, 2059292, 2059293, 2059294, 2059295, 2059296, 2059297
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2059298, 2059299, 2059300, 2059301, 2059302, 2059303, 2059304
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2059298, 2059299, 2059300, 2059301, 2059302, 2059303, 2059304
EPA 351.2 Rev. 2.0 dissolved / E31780	Total Kjeldahl Nitrogen, dissolved, in filtered, aqueous matrices	2059305, 2059306, 2059307, 2059308, 2059309, 2059310, 2059311
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2059298, 2059299, 2059300, 2059301, 2059302, 2059303, 2059304
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2059298, 2059299, 2059300, 2059301, 2059302, 2059303, 2059304
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2059333, 2059334, 2059335, 2059336, 2059337, 2059338, 2059339
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2059333, 2059334, 2059335, 2059336, 2059337, 2059338, 2059339
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2059291, 2059292, 2059293, 2059294, 2059295, 2059296, 2059297
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2059291, 2059292, 2059293, 2059294, 2059295, 2059296, 2059297
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2059291, 2059292, 2059293, 2059294, 2059295, 2059296, 2059297
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2059298, 2059299, 2059300, 2059301, 2059302, 2059303, 2059304

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	02/05/2019			02/05/2019 17:23	Adrian Shelby	2059291, 2059292, 2059293, 2059294, 2059295, 2059296, 2059297
EPA 350.1 Rev. 2.0	02/05/2019			02/08/2019 10:43	Ping Hua	2059303
	02/05/2019			02/08/2019 10:56	Ping Hua	2059298
	02/05/2019			02/08/2019 11:00	Ping Hua	2059299
	02/05/2019			02/08/2019 11:02	Ping Hua	2059300
	02/05/2019			02/08/2019 11:03	Ping Hua	2059301
	02/05/2019			02/08/2019 11:05	Ping Hua	2059302
EPA 351.2 Rev. 2.0	02/05/2019			02/08/2019 11:23	Ping Hua	2059304
	02/05/2019	02/06/2019 16:45	Adrian Shelby	02/07/2019 10:29	Joseph Suarez	2059304
	02/05/2019	02/06/2019 16:45	Adrian Shelby	02/07/2019 10:44	Joseph Suarez	2059298
	02/05/2019	02/06/2019 16:45	Adrian Shelby	02/07/2019 10:46	Joseph Suarez	2059299
	02/05/2019	02/06/2019 16:45	Adrian Shelby	02/07/2019 10:47	Joseph Suarez	2059300
	02/05/2019	02/06/2019 16:45	Adrian Shelby	02/07/2019 10:52	Joseph Suarez	2059301
EPA 351.2 Rev. 2.0 dissolved	02/05/2019	02/06/2019 16:45	Adrian Shelby	02/07/2019 10:53	Joseph Suarez	2059302
	02/05/2019	02/11/2019 11:30	Adrian Shelby	02/12/2019 10:41	Joseph Suarez	2059303
	02/05/2019	02/06/2019 16:45	Adrian Shelby	02/07/2019 10:38	Joseph Suarez	2059311
	02/05/2019	02/06/2019 16:45	Adrian Shelby	02/07/2019 10:55	Joseph Suarez	2059305
	02/05/2019	02/06/2019 16:45	Adrian Shelby	02/07/2019 11:00	Joseph Suarez	2059306
	02/05/2019	02/06/2019 16:45	Adrian Shelby	02/07/2019 11:01	Joseph Suarez	2059307
	02/05/2019	02/06/2019 16:45	Adrian Shelby	02/07/2019 11:03	Joseph Suarez	2059308
	02/05/2019	02/06/2019 16:45	Adrian Shelby	02/07/2019 11:04	Joseph Suarez	2059309
	02/05/2019	02/11/2019 11:30	Adrian Shelby	02/12/2019 10:44	Joseph Suarez	2059310
	02/05/2019			02/06/2019 10:24	Beverly Y. Sanders	2059303
EPA 353.2 Rev. 2.0	02/05/2019			02/06/2019 10:25	Beverly Y. Sanders	2059304
	02/05/2019			02/07/2019 10:03	Beverly Y. Sanders	2059298
	02/05/2019			02/07/2019 10:09	Beverly Y. Sanders	2059299
	02/05/2019			02/07/2019 10:10	Beverly Y. Sanders	2059300
	02/05/2019			02/07/2019 10:12	Beverly Y. Sanders	2059301
	02/05/2019			02/07/2019 10:13	Beverly Y. Sanders	2059302
EPA 365.1 Rev. 2.0	02/05/2019	02/06/2019 14:00	Sima Feizi	02/06/2019 18:21	Rosalyn Ballman	2059303
	02/05/2019	02/06/2019 14:00	Sima Feizi	02/06/2019 18:22	Rosalyn Ballman	2059304
	02/05/2019	02/06/2019 14:00	Sima Feizi	02/07/2019 13:10	Rosalyn Ballman	2059298
	02/05/2019	02/06/2019 14:00	Sima Feizi	02/07/2019 13:11	Rosalyn Ballman	2059299
	02/05/2019	02/06/2019 14:00	Sima Feizi	02/07/2019 13:12	Rosalyn Ballman	2059300, 2059301
	02/05/2019	02/06/2019 14:00	Sima Feizi	02/07/2019 13:13	Rosalyn Ballman	2059302
EPA 8321B	02/05/2019	02/06/2019 09:00	Hoor Shaik	02/07/2019 02:36	Juyoung Kim	2059333
	02/05/2019	02/06/2019 09:00	Hoor Shaik	02/07/2019 03:11	Juyoung Kim	2059334
	02/05/2019	02/06/2019 09:00	Hoor Shaik	02/07/2019 03:45	Juyoung Kim	2059335
	02/05/2019	02/06/2019 09:00	Hoor Shaik	02/07/2019 04:20	Juyoung Kim	2059336

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	02/05/2019	02/06/2019 09:00	Hoor Shaik	02/07/2019 04:55	Juyoung Kim	2059337
	02/05/2019	02/06/2019 09:00	Hoor Shaik	02/07/2019 05:29	Juyoung Kim	2059338
	02/05/2019	02/07/2019 12:00	Hoor Shaik	02/19/2019 05:53	Juyoung Kim	2059339
	02/05/2019	02/08/2019 12:30	Mohammad Ghaffari	02/15/2019 22:54	Mohammad Ghaffari	2059333
	02/05/2019	02/08/2019 12:30	Mohammad Ghaffari	02/15/2019 23:08	Mohammad Ghaffari	2059334
	02/05/2019	02/08/2019 12:30	Mohammad Ghaffari	02/15/2019 23:22	Mohammad Ghaffari	2059335
	02/05/2019	02/08/2019 12:30	Mohammad Ghaffari	02/15/2019 23:49	Mohammad Ghaffari	2059336
	02/05/2019	02/08/2019 12:30	Mohammad Ghaffari	02/16/2019 00:03	Mohammad Ghaffari	2059337
	02/05/2019	02/08/2019 12:30	Mohammad Ghaffari	02/16/2019 00:17	Mohammad Ghaffari	2059338
	02/05/2019	02/08/2019 12:30	Mohammad Ghaffari	02/16/2019 00:30	Mohammad Ghaffari	2059339
SM 2320 B-97	02/05/2019			02/09/2019 21:29	Dale L. Simmons	2059297
	02/05/2019			02/09/2019 22:49	Dale L. Simmons	2059296
	02/05/2019			02/09/2019 23:13	Dale L. Simmons	2059295
	02/05/2019			02/15/2019 10:26	Dale L. Simmons	2059294
	02/05/2019			02/15/2019 12:11	Dale L. Simmons	2059291
	02/05/2019			02/15/2019 12:23	Dale L. Simmons	2059292
	02/05/2019			02/15/2019 12:35	Dale L. Simmons	2059293
SM 2540 D-97	02/05/2019			02/06/2019 15:36	Yijie Li	2059294, 2059295, 2059296, 2059297
	02/05/2019			02/08/2019 15:25	Yijie Li	2059291, 2059292, 2059293
SM 4500 F-C-97	02/05/2019			02/09/2019 21:29	Dale L. Simmons	2059297
	02/05/2019			02/09/2019 22:49	Dale L. Simmons	2059296
	02/05/2019			02/09/2019 23:13	Dale L. Simmons	2059295
	02/05/2019			02/15/2019 09:10	Dale L. Simmons	2059294
	02/05/2019			02/15/2019 09:26	Dale L. Simmons	2059291
	02/05/2019			02/15/2019 09:30	Dale L. Simmons	2059292
	02/05/2019			02/15/2019 09:35	Dale L. Simmons	2059293
SM 5310 B-00	02/05/2019			02/08/2019 05:39	Chelsea Hernandez	2059298
	02/05/2019			02/08/2019 06:03	Chelsea Hernandez	2059299
	02/05/2019			02/08/2019 06:40	Chelsea Hernandez	2059300
	02/05/2019			02/15/2019 15:51	Chelsea Hernandez	2059301
	02/05/2019			02/15/2019 16:44	Chelsea Hernandez	2059302
	02/05/2019			02/15/2019 17:23	Chelsea Hernandez	2059303
	02/05/2019			02/15/2019 18:00	Chelsea Hernandez	2059304