

Chemical Analysis Report

NE-DIST-2018-04-13-01

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

Event Description: **LSJR Downtown Fresh**

Request ID: **RQ-2018-04-09-60**

Customer: **NE-DIST**

Project ID: **SMP**

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Date Certified: 15-MAY-2018 14:36



Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: Trout River at Ramallah Rd

Collection Date/Time: 04/12/2018 11:30

Field ID: 20030752

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1984415	EPA 180.1 Rev. 2.0	Turbidity	2.5		NTU	P343394	
	EPA 300.0 Rev. 2.1	Chloride	20	A	mg Cl/L	P343613	
		Sulfate	10	A	mg SO4/L	P343615	
	SM 2120 B	Color (true)	200		PCU	P343384	
	SM 2320 B-97	Total Alkalinity	1.8	I	mg CaCO3/L	P343952	
	SM 2540 C-97	TDS	104		mg/L	P343892	
	SM 2540 D-97	TSS	3	I	mg/L	P343875	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P343956	
1984416	EPA 350.1 Rev. 2.0	Ammonia-N	0.046		mg N/L	P343691	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.63		mg N/L	P343460	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.046		mg N/L	P343655	
	EPA 365.1 Rev. 2.0	Total-P	0.047		mg P/L	P343597	
	SM 5310 B-00	Organic Carbon	21		mg C/L	P343560	
1984417	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.031		mg P/L	P343381	
1984484	EPA 200.7 Rev. 4.4	Calcium	5.25		mg/L	P343487	
		Iron	660		ug/L	P343487	
		Magnesium	2.29		mg/L	P343487	
		Potassium	2.0		mg/L	P343487	
		Sodium	12.5		mg/L	P343487	
		Zinc	8.2	I	ug/L	P343487	
	EPA 200.8 Rev. 5.4	Arsenic	0.43		ug/L	P343487	
		Cadmium	0.020	U	ug/L	P343487	
		Chromium	0.51	I	ug/L	P343487	
		Copper	0.41	I	ug/L	P343487	
		Lead	0.50		ug/L	P344319	
		Nickel	0.54	I	ug/L	P343487	
		Silver	0.010	U	ug/L	P343487	

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: Blockhouse Cr @ Duval Rd

Collection Date/Time: 04/12/2018 12:15

Field ID: 20030746

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1984482	EPA 8321B	2,4-D	0.10		ug/L	P343321	
		Bentazon	0.032		ug/L	P343321	
		MCP	0.015		ug/L	P343321	
		Triclopyr**	0.0040	U	ug/L	P343321	
		Imidacloprid	0.11		ug/L	P343321	MS, RPD
		Diuron	0.0061	I	ug/L	P343321	RPD
		Pyraclostrobin**	0.0020	U	ug/L	P343321	MS, RPD
		Primidone**	0.0040	U	ug/L	P343321	MS, RPD
		Linuron	0.0040	U	ug/L	P343321	
		Acetaminophen**	0.0080	UJ	ug/L	P343321	MS, RPD, SUR

Field ID: 20030746

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1984482	EPA 8321B	Fenuron	0.016	U	ug/L	P343321	RPD
		Imazapyr**	0.15		ug/L	P343321	
		Carbamazepine**	4.0E-04	U	ug/L	P343321	RPD
		Fluridone**	0.0018	I	ug/L	P343321	
		Hydrocodone**	8.0E-04	U	ug/L	P343321	
		Sucralose**	0.10	U	ug/L	P343548	
		Glyphosate**	0.21	I	ug/L	P343548	
		AMPA**	0.12	I	ug/L	P343548	
		Endothall**	0.10	U	ug/L	P343548	
		Glufosinate**	0.10	U	ug/L	P343548	

Ref. Method and Comment:

EPA 8321B: MS accuracy and precision for imazapyr could not be assessed due to high concentration of parameter in the spiked sample. Refer to the narrative for an explanation of QC Codes.

EPA 8321B: Results confirmed in re-extraction.

Sample Location: Blockhouse 100m abv Irma Rd.

Collection Date/Time: 04/12/2018 12:30

Field ID: G2NE1159

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1984406	EPA 180.1 Rev. 2.0	Turbidity	15	A	NTU	P343394	
	EPA 300.0 Rev. 2.1	Chloride	23		mg Cl/L	P343494	
		Sulfate	11		mg SO4/L	P343493	
	SM 2120 B	Color (true)	75	A	PCU	P343386	
	SM 2320 B-97	Total Alkalinity	55		mg CaCO3/L	P343952	
	SM 2540 C-97	TDS	154		mg/L	P343892	
	SM 2540 D-97	TSS	7	I	mg/L	P343875	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P343956	
1984409	EPA 350.1 Rev. 2.0	Ammonia-N	0.075		mg N/L	P343691	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.68		mg N/L	P343460	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.093		mg N/L	P343655	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P343597	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P343560	
1984412	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.051		mg P/L	P343381	
1984479	EPA 8321B	2,4-D	0.072		ug/L	P343321	
		Bentazon	0.023		ug/L	P343321	
		MCP	0.012		ug/L	P343321	
		Triclopyr**	0.0040	U	ug/L	P343321	
		Imidacloprid	0.073		ug/L	P343321	MS, RPD
		Diuron	0.0040	I	ug/L	P343321	RPD
		Pyraclostrobin**	0.0020	U	ug/L	P343321	MS, RPD
		Primidone**	0.0040	U	ug/L	P343321	MS, RPD
		Linuron	0.0040	U	ug/L	P343321	
		Acetaminophen**	0.0080	U	ug/L	P343321	MS, RPD
		Fenuron	0.016	U	ug/L	P343321	RPD
		Imazapyr**	0.17		ug/L	P343321	
		Carbamazepine**	0.017		ug/L	P343321	RPD

Field ID: G2NE1159

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1984479	EPA 8321B	Fluridone**	0.0012	I	ug/L	P343321	
		Hydrocodone**	8.0E-04	U	ug/L	P343321	
		Sucralose**	0.11	I	ug/L	P343548	
		Glyphosate**	0.16	I	ug/L	P343548	
		AMPA**	0.10	U	ug/L	P343548	
		Endothall**	0.10	U	ug/L	P343548	
		Glufosinate**	0.10	U	ug/L	P343548	

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: MS accuracy and precision for imazapyr could not be assessed due to high concentration of parameter in the spiked sample.

EPA 8321B: Results confirmed in re-extraction.

Sample Location: Hogans Cr at Broad St.

Collection Date/Time: 04/12/2018 13:05

Field ID: 20030729

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1984407	EPA 180.1 Rev. 2.0	Turbidity	3.5		NTU	P343394	
	EPA 300.0 Rev. 2.1	Chloride	20		mg Cl/L	P343613	
		Sulfate	53		mg SO4/L	P343615	
	SM 2120 B	Color (true)	21		PCU	P343384	
	SM 2320 B-97	Total Alkalinity	135		mg CaCO3/L	P343952	
	SM 2540 C-97	TDS	268	A	mg/L	P343892	
	SM 2540 D-97	TSS	3	IA	mg/L	P343875	
	SM 4500 F-C-97	Fluoride	0.20		mg F/L	P343956	
1984410	EPA 350.1 Rev. 2.0	Ammonia-N	0.16		mg N/L	P343691	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.51		mg N/L	P343460	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.20		mg N/L	P343655	
	EPA 365.1 Rev. 2.0	Total-P	0.072		mg P/L	P343597	
	SM 5310 B-00	Organic Carbon	5.2		mg C/L	P343560	
1984413	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.028		mg P/L	P343381	
1984480	EPA 8321B	2,4-D	0.018		ug/L	P343321	
		Bentazon	0.036		ug/L	P343321	
		MCP	0.0031	I	ug/L	P343321	
		Triclopyr**	0.0040	U	ug/L	P343321	
		Imidacloprid	0.037		ug/L	P343321	MS, RPD
		Diuron	0.0052	I	ug/L	P343321	RPD
		Pyraclostrobin**	0.0020	U	ug/L	P343321	MS, RPD
		Primidone**	0.0040	U	ug/L	P343321	MS, RPD
		Linuron	0.0040	U	ug/L	P343321	
		Acetaminophen**	0.056		ug/L	P343321	MS, RPD
		Fenuron	0.016	U	ug/L	P343321	RPD
		Imazapyr**	0.12		ug/L	P343321	
		Carbamazepine**	0.0011	I	ug/L	P343321	RPD
		Fluridone**	8.6E-04	I	ug/L	P343321	
		Hydrocodone**	8.0E-04	U	ug/L	P343321	
		Sucralose**	0.10	U	ug/L	P343548	

Field ID: 20030729

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1984480	EPA 8321B	Glyphosate**	0.14	IJ	ug/L	P343548	SUR
		AMPA**	0.10	UJ	ug/L	P343548	SUR
		Endothall**	0.10	U	ug/L	P343548	
		Glufosinate**	0.10	UJ	ug/L	P343548	SUR

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: MS accuracy and precision for imazapyr could not be assessed due to high concentration of parameter in the spiked sample.

EPA 8321B: Refer to the narrative for an explanation of QC Codes. Results confirmed in re-extraction.

Sample Location: Deer Cr @ Talleyrand Ave

Collection Date/Time: 04/12/2018 13:25

Field ID: 20030792

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1984408	EPA 180.1 Rev. 2.0	Turbidity	6.0		NTU	P343394	
	EPA 300.0 Rev. 2.1	Chloride	150		mg Cl/L	P343613	
		Sulfate	130		mg SO4/L	P343615	
	SM 2120 B	Color (true)	15		PCU	P343384	
	SM 2320 B-97	Total Alkalinity	162		mg CaCO3/L	P343951	
	SM 2540 C-97	TDS	610		mg/L	P343896	
	SM 2540 D-97	TSS	4	IA	mg/L	P343880	
	SM 4500 F-C-97	Fluoride	0.57		mg F/L	P343954	
1984411	EPA 350.1 Rev. 2.0	Ammonia-N	0.29		mg N/L	P343445	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.68		mg N/L	P343424	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.28		mg N/L	P343844	
	EPA 365.1 Rev. 2.0	Total-P	0.10		mg P/L	P343595	
	SM 5310 B-00	Organic Carbon	4.5		mg C/L	P343562	
1984414	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.031		mg P/L	P343383	
1984481	EPA 8321B	2,4-D	0.0051	I	ug/L	P343321	
		Bentazon	0.0034		ug/L	P343321	
		MCP	0.0020	U	ug/L	P343321	
		Triclopyr**	0.0040	U	ug/L	P343321	
		Imidacloprid	0.0029	I	ug/L	P343321	MS, RPD
		Diuron	0.010		ug/L	P343321	RPD
		Pyraclostrobin**	0.0020	U	ug/L	P343321	MS, RPD
		Primidone**	0.0040	U	ug/L	P343321	MS, RPD
		Linuron	0.0040	U	ug/L	P343321	
		Acetaminophen**	0.017	I	ug/L	P343321	MS, RPD
		Fenuron	0.016	U	ug/L	P343321	RPD
		Imazapyr**	0.21		ug/L	P343321	
		Carbamazepine**	4.0E-04	U	ug/L	P343321	RPD
		Fluridone**	8.0E-04	U	ug/L	P343321	
		Hydrocodone**	8.0E-04	U	ug/L	P343321	
		Sucralose**	0.10	U	ug/L	P343548	
		Glyphosate**	0.24	IJ	ug/L	P343548	SUR
		AMPA**	0.10	UJ	ug/L	P343548	SUR
		Endothall**	0.10	U	ug/L	P343548	

Field ID: 20030792

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1984481	EPA 8321B	Glufosinate**	0.10	UJ	ug/L	P343548	SUR

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: MS accuracy and precision for imazapyr could not be assessed due to high concentration of parameter in the spiked sample.

EPA 8321B: Refer to the narrative for an explanation of QC Codes. Results confirmed in re-extraction.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P343394

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P343487

Component	Result	Code	Units
Calcium	0.097	I	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P343487

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

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P344319

Component	Result	Code	Units
Lead	0.050	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P343493

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P343494

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343613

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343615

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343445

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343691

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P343424

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P343460

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P343655

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P343844

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P343595

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P343597

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P343381

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P343383

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

Reference Method: EPA 8321B
Batch ID: P343321

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	8.0E-04	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
MCP	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P343548

Component	Result	Code	Units
AMPA	0.10	U	ug/L
Endothall	0.10	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.10	U	ug/L

Reference Method: SM 2120 B
Batch ID: P343384

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report

Method Blank Results

Reference Method: SM 2120 B
Batch ID: P343386

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P343951

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

Reference Method: SM 2320 B-97
Batch ID: P343952

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

Reference Method: SM 2540 C-97
Batch ID: P343892

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P343896

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P343875

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P343880

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P343954

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P343956

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: P343560

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

Reference Method: SM 5310 B-00
Batch ID: P343562

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P343487

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	104		P	85 - 115
Iron	104		P	85 - 115
Magnesium	111		P	85 - 115
Potassium	102		P	85 - 115
Sodium	110		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P343487

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	100		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	96.4		P	85 - 115
Copper	95.7		P	85 - 115
Nickel	98.2		P	85 - 115
Silver	98.8		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P344319

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Lead	95.8		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343493

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	96.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343494

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343613

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	94.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343615

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	96.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343445

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343691

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.7		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P343424

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P343460

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P343655

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P343844

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: P343595

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P343597

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P343381

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P343383

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

Reference Method: EPA 8321B
Batch ID: P343321

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	83.4		P	40 - 150
Acetaminophen	115		P	30 - 150
Bentazon	105		P	30 - 150
Carbamazepine	101		P	40 - 150
Diuron	69.5		P	40 - 150
Fenuron	126		P	40 - 150
Fluridone	49.2		P	40 - 150
Hydrocodone	106		P	40 - 150
Imazapyr	82.5		P	40 - 150
Imidacloprid	108		P	40 - 160
Linuron	66.9		P	40 - 150
MCPP	68.9		P	40 - 150
Primidone	119		P	40 - 150
Pyraclostrobin	54.9		P	40 - 150
Triclopyr	76.9		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P343548

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
AMPA	85.4		P	40 - 140
Endothall	87.0		P	40 - 140
Glufosinate	75.6		P	40 - 140
Glyphosate	87.3		P	40 - 140
Sucralose	118		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P343951

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P343952

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

Reference Method: SM 4500 F-C-97
Batch ID: P343954

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.4		P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P343956

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.3		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P343560

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.8		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P343562

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P343487

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1984354	Calcium	102		P	80 - 120
1984354	Iron	104		P	80 - 120
1984354	Magnesium	108		P	80 - 120
1984354	Potassium	100		P	80 - 120
1984354	Sodium	104		P	80 - 120
1984354	Zinc	101		P	80 - 120
1984472	Calcium	105	101	P/P	80 - 120
1984472	Iron	106	103	P/P	80 - 120
1984472	Magnesium	112	109	P/P	80 - 120
1984472	Potassium	109	104	P/P	80 - 120
1984472	Sodium	106	103	P/P	80 - 120
1984472	Zinc	103	102	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P343487

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1984354	Arsenic	99.9		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P343487

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1984354	Cadmium	101		P	80 - 120
1984354	Chromium	97.4		P	80 - 120
1984354	Copper	93.6		P	80 - 120
1984354	Nickel	98.0		P	80 - 120
1984354	Silver	98.3		P	80 - 120
1984472	Arsenic	99.4	99.4	P/P	80 - 120
1984472	Cadmium	101	100	P/P	80 - 120
1984472	Chromium	97.3	96.2	P/P	80 - 120
1984472	Copper	95.0	94.7	P/P	80 - 120
1984472	Nickel	98.1	97.0	P/P	80 - 120
1984472	Silver	98.5	98.0	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P344319

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1987474	Lead	92.6	93.4	P/P	75 - 125

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343493

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1984046	Sulfate	94.3		P	90 - 110
1984328	Sulfate	97.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343494

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1984046	Chloride	99.3		P	90 - 110
1984328	Chloride	97.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343613

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1984415	Chloride	94.7		P	90 - 110
1984524	Chloride	95.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343615

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1984415	Sulfate	94.0		P	90 - 110
1984524	Sulfate	96.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343445

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983844	Ammonia-N	103	103	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343691

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1984371	Ammonia-N	97.2	96.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P343424

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1984411	Kjeldahl Nitrogen	102	98.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P343460

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1984426	Kjeldahl Nitrogen	91.4	91.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P343655

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1984330	NO2NO3-N	97.8	98.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P343844

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1984411	NO2NO3-N	102		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P343595

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1984411	Total-P	99.1	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P343597

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1984410	Total-P	102	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P343381

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1984242	O-Phosphate-P	97.5	96.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P343383

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1984414	O-Phosphate-P	95.7	96.0	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P343321

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1984892	2,4-D	91.3	98.0	P/P	40 - 150
1984892	Acetaminophen	158	97.8	F/P	30 - 150
1984892	Bentazon	108	113	P/P	30 - 150
1984892	Carbamazepine	127	92.0	P/P	40 - 150
1984892	Diuron	84.1	58.9	P/P	40 - 150
1984892	Fenuron	138	90.5	P/P	40 - 150
1984892	Fluridone	54.9	40.4	P/P	40 - 150
1984892	Hydrocodone	122	98.6	P/P	40 - 150
1984892	Imidacloprid	276	179	F/F	40 - 160
1984892	Linuron	82.9	64.6	P/P	40 - 150
1984892	MCPP	83.6	85.8	P/P	40 - 150
1984892	Primidone	153	91.0	F/P	40 - 150
1984892	Pyraclostrobin	69.8	38.1	P/F	40 - 150
1984892	Triclopyr	81.7	90.6	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P343548

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1984992	AMPA	81.3	68.5	P/P	40 - 140
1984992	Endothall	117	113	P/P	40 - 140
1984992	Glufosinate	85.8	84.9	P/P	40 - 140
1984992	Glyphosate	71.1	72.4	P/P	40 - 140
1984992	Sucralose	51.9	48.9	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P343954

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1980264	Fluoride	93.3	94.9	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P343956

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1984236	Fluoride	95.2	95.7	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P343560

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1984026	Organic Carbon	95.2	95.6	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P343562

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983934	Organic Carbon	90.4	92.0	P/P	85 - 115

Quality Assurance Report Precision

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P343394

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984406	Turbidity	0.0	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P343487

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984472	Calcium	2.41	Spike	P	0 - 20
1984472	Iron	2.92	Spike	P	0 - 20
1984472	Magnesium	2.59	Spike	P	0 - 20
1984472	Potassium	3.60	Spike	P	0 - 20
1984472	Sodium	1.88	Spike	P	0 - 20
1984472	Zinc	1.81	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P343487

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984472	Arsenic	0.0116	Spike	P	0 - 20
1984472	Cadmium	0.984	Spike	P	0 - 20
1984472	Chromium	1.21	Spike	P	0 - 20
1984472	Copper	0.375	Spike	P	0 - 20
1984472	Nickel	1.14	Spike	P	0 - 20
1984472	Silver	0.541	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P344319

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1987474	Lead	0.838	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343493

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984046	Sulfate	7.71	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343494

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984046	Chloride	6.54	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343613

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984415	Chloride	0.00689	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343615

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984415	Sulfate	0.137	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343445

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983844	Ammonia-N	0.361	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343691

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984371	Ammonia-N	0.334	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P343424

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984411	Kjeldahl Nitrogen	2.35	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P343460

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984426	Kjeldahl Nitrogen	0.0708	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P343655

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984330	NO2NO3-N	0.458	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P343844

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984411	NO2NO3-N	0.206	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P343595

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984411	Total-P	2.42	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P343597

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984410	Total-P	0.393	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P343381

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984242	O-Phosphate-P	0.590	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P343383

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984414	O-Phosphate-P	0.236	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P343321

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984892	2,4-D	6.62	Spike	P	0 - 30
1984892	Acetaminophen	46.8	Spike	F	0 - 30
1984892	Bentazon	4.20	Spike	P	0 - 30
1984892	Carbamazepine	31.4	Spike	F	0 - 30
1984892	Diuron	31.0	Spike	F	0 - 30
1984892	Fenuron	41.6	Spike	F	0 - 30
1984892	Fluridone	26.9	Spike	P	0 - 30
1984892	Hydrocodone	21.6	Spike	P	0 - 30
1984892	Imidacloprid	39.9	Spike	F	0 - 30
1984892	Linuron	24.7	Spike	P	0 - 30
1984892	MCP	2.61	Spike	P	0 - 30
1984892	Primidone	48.0	Spike	F	0 - 30
1984892	Pyraclostrobin	58.9	Spike	F	0 - 30
1984892	Triclopyr	10.3	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P343548

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984992	AMPA	17.0	Spike	P	0 - 30
1984992	Endothall	2.80	Spike	P	0 - 30
1984992	Glufosinate	1.08	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P343548

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984992	Glyphosate	1.79	Spike	P	0 - 30
1984992	Sucralose	5.19	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P343384

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984366	Color (true)	0.816	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P343386

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984406	Color (true)	1.75	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P343951

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983827	Total Alkalinity	0.472	Sample	P	0 - 1.6

Reference Method: SM 2320 B-97
Batch ID: P343952

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984236	Total Alkalinity	0.123	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P343892

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984407	TDS	5.59	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P343896

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984882	TDS	3.52	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P343954

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1980264	Fluoride	0.946	Spike	P	0 - 3.5

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P343956

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984236	Fluoride	0.514	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P343560

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984026	Organic Carbon	0.253	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P343562

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983934	Organic Carbon	1.28	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: 1984479
Field Sample ID: G2NE1159

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	88.9	P	30 - 160
EPA 8321B	2,4-D-d3	88.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	144	P	30 - 160
EPA 8321B	Acetaminophen-d4	144	P	30 - 160
EPA 8321B	Carbamazepine-d10	128	P	30 - 160
EPA 8321B	Carbamazepine-d10	128	P	30 - 160
EPA 8321B	Diuron-d6	72.2	P	30 - 160
EPA 8321B	Diuron-d6	72.2	P	30 - 160
EPA 8321B	Endothall-d6	73.9	P	40 - 160
EPA 8321B	Endothall-d6	73.9	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	51.5	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	51.5	P	40 - 160
EPA 8321B	Primidone-d5	133	P	30 - 160
EPA 8321B	Primidone-d5	133	P	30 - 160
EPA 8321B	Sucralose-d6	45.6	P	40 - 160
EPA 8321B	Sucralose-d6	45.6	P	40 - 160

Lab Sample ID: 1984480
Field Sample ID: 20030729

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	73.4	P	30 - 160
EPA 8321B	2,4-D-d3	73.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	145	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1984480
Field Sample ID: 20030729

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	145	P	30 - 160
EPA 8321B	Carbamazepine-d10	143	P	30 - 160
EPA 8321B	Carbamazepine-d10	143	P	30 - 160
EPA 8321B	Diuron-d6	78.9	P	30 - 160
EPA 8321B	Diuron-d6	78.9	P	30 - 160
EPA 8321B	Endothall-d6	69.6	P	40 - 160
EPA 8321B	Endothall-d6	69.6	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	30.7	F	40 - 160
EPA 8321B	Glyphosate 13C 15N	30.7	F	40 - 160
EPA 8321B	Primidone-d5	153	P	30 - 160
EPA 8321B	Primidone-d5	153	P	30 - 160
EPA 8321B	Sucralose-d6	67.2	P	40 - 160
EPA 8321B	Sucralose-d6	67.2	P	40 - 160

Lab Sample ID: 1984481
Field Sample ID: 20030792

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	45.0	P	30 - 160
EPA 8321B	2,4-D-d3	45.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	140	P	30 - 160
EPA 8321B	Acetaminophen-d4	140	P	30 - 160
EPA 8321B	Carbamazepine-d10	123	P	30 - 160
EPA 8321B	Carbamazepine-d10	123	P	30 - 160
EPA 8321B	Diuron-d6	70.6	P	30 - 160
EPA 8321B	Diuron-d6	70.6	P	30 - 160
EPA 8321B	Endothall-d6	69.3	P	40 - 160
EPA 8321B	Endothall-d6	69.3	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	32.7	F	40 - 160
EPA 8321B	Glyphosate 13C 15N	32.7	F	40 - 160
EPA 8321B	Primidone-d5	132	P	30 - 160
EPA 8321B	Primidone-d5	132	P	30 - 160
EPA 8321B	Sucralose-d6	69.5	P	40 - 160
EPA 8321B	Sucralose-d6	69.5	P	40 - 160

Lab Sample ID: 1984482
Field Sample ID: 20030746

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	114	P	30 - 160
EPA 8321B	2,4-D-d3	114	P	30 - 160
EPA 8321B	Acetaminophen-d4	164	F	30 - 160
EPA 8321B	Acetaminophen-d4	164	F	30 - 160
EPA 8321B	Carbamazepine-d10	137	P	30 - 160
EPA 8321B	Carbamazepine-d10	137	P	30 - 160
EPA 8321B	Diuron-d6	89.8	P	30 - 160
EPA 8321B	Diuron-d6	89.8	P	30 - 160
EPA 8321B	Endothall-d6	75.0	P	40 - 160
EPA 8321B	Endothall-d6	75.0	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	47.5	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	47.5	P	40 - 160
EPA 8321B	Primidone-d5	137	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1984482
Field Sample ID: 20030746

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Primidone-d5	137	P	30 - 160
EPA 8321B	Sucralose-d6	55.0	P	40 - 160
EPA 8321B	Sucralose-d6	55.0	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A83231
Included Lab Sample IDs: 1984412, 1984413, 1984414, 1984417

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	99.8	P/P	90 - 110
O-Phosphate-P	100	100	P/P	90 - 110
O-Phosphate-P	101	100	P/P	90 - 110

Reference Method: SM 2120 B
Run ID: A83232
Included Lab Sample IDs: 1984406, 1984407, 1984408, 1984415

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.2	99.9	P/P	90 - 115
Color (true)	99.7	100	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A83235
Included Lab Sample IDs: 1984406, 1984407, 1984408, 1984415

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	97.5	98.5	P/P	95 - 105

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A83249
Included Lab Sample IDs: 1984411

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.8	100	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A83267
Included Lab Sample IDs: 1984406, 1984407, 1984408, 1984415

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	101	P/P	90 - 110
Chloride	98.9	98.6	P/P	90 - 110
Sulfate	101	102	P/P	90 - 110
Sulfate	98.7	99.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-00

Run ID: A83286

Included Lab Sample IDs: 1984409, 1984410, 1984411, 1984416

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	93.8	92.4	P/P	90 - 110
Organic Carbon	97.4	98.6	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A83301

Included Lab Sample IDs: 1984484

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	99.6	101	P/P	90 - 110
Iron	98.4	98.7	P/P	90 - 110
Magnesium	101	102	P/P	90 - 110
Potassium	105	108	P/P	90 - 110
Zinc	102	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A83312

Included Lab Sample IDs: 1984409, 1984410, 1984411, 1984416

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	95.6	P/P	90 - 110
Kjeldahl Nitrogen	101	98.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A83321

Included Lab Sample IDs: 1984409, 1984410, 1984416

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A83326

Included Lab Sample IDs: 1984409, 1984410, 1984416

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

Reference Method: EPA 8321B

Run ID: A83333

Included Lab Sample IDs: 1984479, 1984480, 1984481, 1984482

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	110	88.8	P/P	60 - 150
AMPA	88.8	70.9	P/P	60 - 150
Endothall	115	88.5	P/P	60 - 150
Endothall	88.5	79.7	P/P	60 - 150
Glufosinate	107	69.2	P/P	60 - 150
Glufosinate	80.0	107	P/P	60 - 150
Glyphosate	106	129	P/P	60 - 150
Glyphosate	129	84.9	P/P	60 - 150
Sucralose	103	96.2	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A83333

Included Lab Sample IDs: 1984479, 1984480, 1984481, 1984482

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	139	103	P/P	60 - 150

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A83336

Included Lab Sample IDs: 1984484

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A83356

Included Lab Sample IDs: 1984484

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	98.5	99.2	P/P	90 - 110
Cadmium	103	103	P/P	90 - 110
Chromium	98.4	97.0	P/P	90 - 110
Copper	95.5	95.1	P/P	90 - 110
Nickel	95.3	95.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A83357

Included Lab Sample IDs: 1984411, 1984416

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.2	P/P	90 - 110
Total-P	99.5	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A83365

Included Lab Sample IDs: 1984409, 1984410

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A83382

Included Lab Sample IDs: 1984411

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.5	100	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A83412

Included Lab Sample IDs: 1984484

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Silver	97.2	99.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-97

Run ID: A83420

Included Lab Sample IDs: 1984406, 1984407, 1984408, 1984415

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	99.1	P/P	90 - 110
Total Alkalinity	102	99.2	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A83420

Included Lab Sample IDs: 1984406, 1984407, 1984408, 1984415

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.1	99.5	P/P	90 - 110
Fluoride	99.5	98.6	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A83582

Included Lab Sample IDs: 1984484

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

Reference Method: EPA 8321B

Run ID: A83600

Included Lab Sample IDs: 1984479, 1984480, 1984481, 1984482

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	149	119	P/P	50 - 150
Acetaminophen	139	138	P/P	60 - 150
Bentazon	158	144	P/P	50 - 160
Carbamazepine	144	141	P/P	60 - 150
Diuron	131	133	P/P	60 - 150
Fenuron	137	142	P/P	60 - 150
Fluridone	102	110	P/P	60 - 160
Hydrocodone	124	121	P/P	60 - 150
Imazapyr	111	115	P/P	50 - 150
Imidacloprid	132	137	P/P	60 - 150
Linuron	116	117	P/P	60 - 150
MCPP	123	127	P/P	50 - 150
Primidone	122	128	P/P	60 - 150
Pyraclostrobin	91.0	83.0	P/P	60 - 150
Triclopyr	123	136	P/P	50 - 150

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				0.0	
EPA 200.7 Rev. 4.4	Calcium	104	102 105 101			2.41

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision SMP	MS
			LCS				
EPA 200.7 Rev. 4.4	Iron	104	104	106	103		2.92
	Magnesium	111	108	112	109		2.59
	Potassium	102	100	109	104		3.60
	Sodium	110	104	106	103		1.88
	Zinc	101	101	103	102		1.81
EPA 200.8 Rev. 5.4	Arsenic	100	99.9	99.4	99.4		0.0116
	Cadmium	101	101	101	100		0.984
	Chromium	96.4	97.4	97.3	96.2		1.21
	Copper	95.7	93.6	95.0	94.7		0.375
	Lead	95.8	92.6	93.4			0.838
	Nickel	98.2	98.0	98.1	97.0		1.14
	Silver	98.8	98.3	98.5	98.0		0.541
EPA 300.0 Rev. 2.1	Chloride	98.2	99.3	97.6		6.54	
	Chloride	94.8	94.7	95.3		0.0068	
	Sulfate	96.8	94.3	97.1		7.71	
	Sulfate	96.3	94.0	96.4		0.137	
EPA 350.1 Rev. 2.0	Ammonia-N	103	103	103			0.361
	Ammonia-N	96.7	97.2	96.8			0.334
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.9	102	98.6			2.35
	Kjeldahl Nitrogen	106	91.4	91.5			0.0708
EPA 353.2 Rev. 2.0	NO2NO3-N	100	97.8	98.2			0.458
	NO2NO3-N	100	102				0.206
EPA 365.1 Rev. 2.0	Total-P	105	99.1	102			2.42
	Total-P	101	102	103			0.393
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.0	97.5	96.9			0.590
	O-Phosphate-P	100	95.7	96.0			0.236
EPA 8321B	2,4-D	83.4	91.3	98.0			6.62
	Acetaminophen	115	158	97.8			46.8
	AMPA	85.4	81.3	68.5			17.0
	Bentazon	105	108	113			4.20
	Carbamazepine	101	127	92.0			31.4
	Diuron	69.5	84.1	58.9			31.0
	Endothall	87.0	117	113			2.80
	Fenuron	126	138	90.5			41.6
	Fluridone	49.2	54.9	40.4			26.9
	Glufosinate	75.6	85.8	84.9			1.08
	Glyphosate	87.3	71.1	72.4			1.79
	Hydrocodone	106	122	98.6			21.6
	Imazapyr	82.5					
	Imidacloprid	108	276	179			39.9
	Linuron	66.9	82.9	64.6			24.7
	MCPP	68.9	83.6	85.8			2.61
	Primidone	119	153	91.0			48.0
	Pyraclostrobin	54.9	69.8	38.1			58.9
	Sucralose	118	51.9	48.9			5.19
	Triclopyr	76.9	81.7	90.6			10.3
SM 2120 B	Color (true)					0.816	
	Color (true)					1.75	
SM 2320 B-97	Total Alkalinity	101				0.472	
	Total Alkalinity	101				0.123	
SM 2540 C-97	TDS					5.59	
	TDS					3.52	
SM 4500 F-C-97	Fluoride	95.4	93.3	94.9			0.946
	Fluoride	96.3	95.2	95.7			0.514

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
SM 5310 B-00	Organic Carbon	95.8	95.2	95.6		0.253
	Organic Carbon	96.0	90.4	92.0		1.28

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1984406, 1984407, 1984408, 1984415
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1984484
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1984484
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1984406, 1984407, 1984408, 1984415
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1984406, 1984407, 1984408, 1984415
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1984409, 1984410, 1984411, 1984416
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1984409, 1984410, 1984411, 1984416
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1984409, 1984410, 1984411, 1984416
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1984409, 1984410, 1984411, 1984416
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1984412, 1984413, 1984414, 1984417
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1984479, 1984480, 1984481, 1984482
SM 2120 B / E31780	True Color measured at 450 nm	1984406, 1984407, 1984408, 1984415
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1984406, 1984407, 1984408, 1984415
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1984406, 1984407, 1984408, 1984415
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1984406, 1984407, 1984408, 1984415
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1984406, 1984407, 1984408, 1984415
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1984409, 1984410, 1984411, 1984416

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	04/13/2018			04/13/2018 15:33	Tanya Welborn	1984406, 1984407, 1984408, 1984415
EPA 200.7 Rev. 4.4	04/13/2018	04/16/2018 17:45	Elliott D. Healy	04/17/2018 17:14	Martin Acosta	1984484
	04/13/2018	04/16/2018 17:45	Elliott D. Healy	04/18/2018 14:55	Martin Acosta	1984484
EPA 200.8 Rev. 5.4	04/13/2018	04/16/2018 17:45	Elliott D. Healy	04/19/2018 18:03	Nadine Brooks	1984484
	04/13/2018	04/16/2018 17:45	Elliott D. Healy	04/23/2018 16:25	Nadine Brooks	1984484
	04/13/2018	04/30/2018 15:15	Elliott D. Healy	05/01/2018 19:42	Robert K Palmer	1984484
EPA 300.0 Rev. 2.1	04/13/2018			04/16/2018 22:01	Lipi Saha	1984406
	04/13/2018			04/17/2018 13:33	Lipi Saha	1984415
	04/13/2018			04/17/2018 14:21	Lipi Saha	1984407
	04/13/2018			04/17/2018 14:33	Lipi Saha	1984408
EPA 350.1 Rev. 2.0	04/13/2018			04/13/2018 17:18	Julia Storbeck	1984411
	04/13/2018			04/17/2018 12:54	Ping Hua	1984409
	04/13/2018			04/17/2018 12:55	Ping Hua	1984410
	04/13/2018			04/17/2018 12:57	Ping Hua	1984416
EPA 351.2 Rev. 2.0	04/13/2018	04/16/2018 15:30	Adrian Shelby	04/18/2018 10:16	Joseph Suarez	1984411
	04/13/2018	04/16/2018 15:30	Adrian Shelby	04/18/2018 10:59	Joseph Suarez	1984409
	04/13/2018	04/16/2018 15:30	Adrian Shelby	04/18/2018 11:01	Joseph Suarez	1984410
	04/13/2018	04/16/2018 15:30	Adrian Shelby	04/18/2018 11:02	Joseph Suarez	1984416
EPA 353.2 Rev. 2.0	04/13/2018			04/18/2018 13:06	Lauren Bottorf	1984410
	04/13/2018			04/18/2018 13:07	Lauren Bottorf	1984416
	04/13/2018			04/18/2018 14:45	Lauren Bottorf	1984409
	04/13/2018			04/20/2018 10:24	Lauren Bottorf	1984411
EPA 365.1 Rev. 2.0	04/13/2018	04/17/2018 13:49	Sima Feizi	04/19/2018 10:22	Beverly Y. Sanders	1984410
	04/13/2018	04/17/2018 13:49	Sima Feizi	04/19/2018 10:31	Beverly Y. Sanders	1984409
	04/13/2018	04/17/2018 13:49	Sima Feizi	04/19/2018 14:34	Beverly Y. Sanders	1984411
	04/13/2018	04/17/2018 13:49	Sima Feizi	04/19/2018 14:51	Beverly Y. Sanders	1984416
EPA 365.1 Rev. 2.0 dissolved	04/13/2018			04/13/2018 14:21	Megan Treadwell	1984414
	04/13/2018			04/13/2018 14:33	Megan Treadwell	1984412
	04/13/2018			04/13/2018 15:00	Megan Treadwell	1984413
	04/13/2018			04/13/2018 15:02	Megan Treadwell	1984417
EPA 8321B	04/13/2018	04/18/2018 12:00	Hoor Shaik	04/18/2018 13:34	S. M. Reddy	1984479
	04/13/2018	04/18/2018 12:00	Hoor Shaik	04/18/2018 13:50	S. M. Reddy	1984480
	04/13/2018	04/18/2018 12:00	Hoor Shaik	04/18/2018 14:06	S. M. Reddy	1984481
	04/13/2018	04/18/2018 12:00	Hoor Shaik	04/18/2018 14:37	S. M. Reddy	1984482
	04/13/2018	04/19/2018 08:30	Hoor Shaik	04/21/2018 05:24	Julie Michelle Frank	1984479
	04/13/2018	04/19/2018 08:30	Hoor Shaik	04/21/2018 05:58	Julie Michelle Frank	1984480
	04/13/2018	04/19/2018 08:30	Hoor Shaik	04/21/2018 06:33	Julie Michelle Frank	1984481
	04/13/2018	04/19/2018 08:30	Hoor Shaik	04/21/2018 07:08	Julie Michelle Frank	1984482
	04/13/2018	04/19/2018 08:30	Hoor Shaik	04/21/2018 20:59	Julie Michelle Frank	1984479
	04/13/2018	04/19/2018 08:30	Hoor Shaik	04/21/2018 21:33	Julie Michelle Frank	1984480

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	04/13/2018	04/19/2018 08:30	Hoor Shaik	04/21/2018 22:08	Julie Michelle Frank	1984481
	04/13/2018	04/19/2018 08:30	Hoor Shaik	04/21/2018 22:43	Julie Michelle Frank	1984482
SM 2120 B	04/13/2018			04/13/2018 15:05	Tanya Welborn	1984407
	04/13/2018			04/13/2018 15:06	Tanya Welborn	1984408
	04/13/2018			04/13/2018 15:22	Tanya Welborn	1984406, 1984415
SM 2320 B-97	04/13/2018			04/24/2018 03:12	Dale L. Simmons	1984408
	04/13/2018			04/24/2018 07:39	Dale L. Simmons	1984406
	04/13/2018			04/24/2018 07:49	Dale L. Simmons	1984407
	04/13/2018			04/24/2018 08:00	Dale L. Simmons	1984415
SM 2540 C-97	04/13/2018			04/18/2018 16:03	Yijie Li	1984406, 1984407, 1984408, 1984415
SM 2540 D-97	04/13/2018			04/18/2018 16:03	Yijie Li	1984406, 1984407, 1984408, 1984415
SM 4500 F-C-97	04/13/2018			04/24/2018 02:41	Dale L. Simmons	1984408
	04/13/2018			04/24/2018 07:39	Dale L. Simmons	1984406
	04/13/2018			04/24/2018 07:49	Dale L. Simmons	1984407
	04/13/2018			04/24/2018 08:00	Dale L. Simmons	1984415
SM 5310 B-00	04/13/2018			04/16/2018 21:11	Megan Treadwell	1984409
	04/13/2018			04/16/2018 21:26	Megan Treadwell	1984410
	04/13/2018			04/16/2018 21:41	Megan Treadwell	1984416
	04/13/2018			04/17/2018 10:51	Megan Treadwell	1984411