

Chemical Analysis Report

NW-DIST-2018-05-15-02

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

Event Description: **Bayou Chico BMAP Source DUP**

Request ID: **RQ-2018-04-09-18**

Customer: **NW-DIST**

Project ID: **BMAP**

Send Reports to:
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Date Certified: 11-JUN-2018 15:47



Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: Bayou Chico at W St. Bridge

Collection Date/Time: 05/14/2018 14:00

Field ID: 33020JF1

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1992711	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P345362	
1992714	EPA 350.1 Rev. 2.0	Ammonia-N	0.059		mg N/L	P345568	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.30		mg N/L	P346212	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.70		mg N/L	P345411	
	EPA 365.1 Rev. 2.0	Total-P	0.028		mg P/L	P345445	
1992729	EPA 8321B	2,4-D	0.0020	U	ug/L	P345194	
		Bentazon	8.0E-04	U	ug/L	P345194	
		MCP	0.0020	U	ug/L	P345194	
		Triclopyr**	0.0040	U	ug/L	P345194	
		Imidacloprid	0.042		ug/L	P345194	
		Diuron	0.0020	U	ug/L	P345194	
		Pyraclostrobin**	0.0020	U	ug/L	P345194	
		Primidone**	0.0088	I	ug/L	P345194	
		Linuron	0.0040	U	ug/L	P345194	
		Acetaminophen**	0.0080	U	ug/L	P345194	
		Fenuron	0.016	U	ug/L	P345194	
		Imazapyr**	0.0040	U	ug/L	P345194	
		Carbamazepine**	0.0032		ug/L	P345194	
		Fluridone**	4.0E-04	U	ug/L	P345194	
		Hydrocodone**	8.0E-04	U	ug/L	P345194	
		Sucralose**	0.57		ug/L	P345129	

Sample Location: Bayou Chico at W St. Bridge

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

Field ID: 33020JF1_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1992712	EPA 180.1 Rev. 2.0	Turbidity	2.5		NTU	P345362	
1992715	EPA 350.1 Rev. 2.0	Ammonia-N	0.058		mg N/L	P345568	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.26		mg N/L	P346212	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.70		mg N/L	P345411	
	EPA 365.1 Rev. 2.0	Total-P	0.030		mg P/L	P345445	
1992730	EPA 8321B	2,4-D	0.0020	U	ug/L	P345194	
		Bentazon	8.0E-04	U	ug/L	P345194	
		MCP	0.0020	U	ug/L	P345194	
		Triclopyr**	0.0040	U	ug/L	P345194	
		Imidacloprid	0.038		ug/L	P345194	
		Diuron	0.0020	U	ug/L	P345194	
		Pyraclostrobin**	0.0020	U	ug/L	P345194	
		Primidone**	0.0076	I	ug/L	P345194	
		Linuron	0.0040	U	ug/L	P345194	
		Acetaminophen**	0.0080	U	ug/L	P345194	
		Fenuron	0.016	U	ug/L	P345194	
		Imazapyr**	0.0040	U	ug/L	P345194	
		Carbamazepine**	0.0027		ug/L	P345194	

Field ID: 33020JF1_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1992730	EPA 8321B	Fluridone**	4.0E-04	U	ug/L	P345194	
		Hydrocodone**	8.0E-04	U	ug/L	P345194	
		Sucralose**	0.70		ug/L	P345129	

Sample Location: Bayou Chico at Navy Blvd. Bridge

Collection Date/Time: 05/14/2018 13:20

Field ID: 33020JE20

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1992713	EPA 180.1 Rev. 2.0	Turbidity	2.5		NTU	P345362	
1992716	EPA 350.1 Rev. 2.0	Ammonia-N	0.023		mg N/L	P345570	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.42		mg N/L	P345824	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.15		mg N/L	P345670	
	EPA 365.1 Rev. 2.0	Total-P	0.021		mg P/L	P345382	
1992731	EPA 8321B	2,4-D	0.0020	U	ug/L	P345194	
		Bentazon	8.0E-04	U	ug/L	P345194	
		MCP	0.0020	U	ug/L	P345194	
		Triclopyr**	0.0040	U	ug/L	P345194	
		Imidacloprid	0.0079	I	ug/L	P345194	
		Diuron	0.0070	I	ug/L	P345194	
		Pyraclostrobin**	0.0020	U	ug/L	P345194	
		Primidone**	0.0040	U	ug/L	P345194	
		Linuron	0.0040	U	ug/L	P345194	
		Acetaminophen**	0.0080	U	ug/L	P345194	
		Fenuron	0.016	U	ug/L	P345194	
		Imazapyr**	0.0040	U	ug/L	P345194	
		Carbamazepine**	0.0021		ug/L	P345194	
		Fluridone**	4.0E-04	U	ug/L	P345194	
		Hydrocodone**	8.0E-04	U	ug/L	P345194	
		Sucralose**	0.45		ug/L	P345129	

Sample Location: Jones Creek Upstream of New Warrington Rd

Collection Date/Time: 05/14/2018 12:00

Field ID: 33020117

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1992717	EPA 180.1 Rev. 2.0	Turbidity	4.4	A	NTU	P345362	
1992719	EPA 350.1 Rev. 2.0	Ammonia-N	0.036		mg N/L	P345568	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.44		mg N/L	P345979	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.15		mg N/L	P345741	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P345445	
1992732	EPA 8321B	2,4-D	0.0020	U	ug/L	P345194	
		Bentazon	8.0E-04	U	ug/L	P345194	
		MCP	0.0020	U	ug/L	P345194	
		Triclopyr**	0.0040	U	ug/L	P345194	
		Imidacloprid	0.0020	U	ug/L	P345194	
		Diuron	0.0020	U	ug/L	P345194	

Field ID: 33020117

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1992732	EPA 8321B	Pyraclostrobin**	0.0020	U	ug/L	P345194	
		Primidone**	0.0040	U	ug/L	P345194	
		Linuron	0.0040	U	ug/L	P345194	
		Acetaminophen**	0.0080	U	ug/L	P345194	
		Fenuron	0.016	U	ug/L	P345194	
		Imazapyr**	0.0040	U	ug/L	P345194	
		Carbamazepine**	4.0E-04	U	ug/L	P345194	
		Fluridone**	4.0E-04	U	ug/L	P345194	
		Hydrocodone**	8.0E-04	U	ug/L	P345194	
		Sucralose**	1.4		ug/L	P345129	

Sample Location: Jackson Creek at Old Corry Road

Collection Date/Time: 05/14/2018 11:15

Field ID: 33020221

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1992718	EPA 180.1 Rev. 2.0	Turbidity	1.1		NTU	P345363	
1992720	EPA 350.1 Rev. 2.0	Ammonia-N	0.017		mg N/L	P345569	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.31		mg N/L	P345979	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.6		mg N/L	P345412	
	EPA 365.1 Rev. 2.0	Total-P	0.016		mg P/L	P345445	
1992733	EPA 8321B	2,4-D	0.0020	U	ug/L	P345194	
		Bentazon	8.0E-04	U	ug/L	P345194	
		MCP	0.0020	U	ug/L	P345194	
		Triclopyr**	0.0040	U	ug/L	P345194	
		Imidacloprid	0.060		ug/L	P345194	
		Diuron	0.035		ug/L	P345194	
		Pyraclostrobin**	0.0020	U	ug/L	P345194	
		Primidone**	0.0040	U	ug/L	P345194	
		Linuron	0.0040	U	ug/L	P345194	
		Acetaminophen**	0.0080	U	ug/L	P345194	
		Fenuron	0.016	U	ug/L	P345194	
		Imazapyr**	0.0073	I	ug/L	P345194	
		Carbamazepine**	0.019		ug/L	P345194	
		Fluridone**	4.0E-04	U	ug/L	P345194	
		Hydrocodone**	8.0E-04	U	ug/L	P345194	
		Sucralose**	2.7		ug/L	P345129	

Sample Location: Pensacola Bay at Sanders Beach

Collection Date/Time: 05/14/2018 10:00

Field ID: 33020J10

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1992721	EPA 180.1 Rev. 2.0	Turbidity	1.0		NTU	P345363	
1992722	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P345570	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.25	I	mg N/L	P345824	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P345670	

Field ID: 33020J10

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1992722	EPA 365.1 Rev. 2.0	Total-P	0.009	I	mg P/L	P345382	

Sample Location: Bayou Chico at Mandalay Drive

Collection Date/Time: 05/14/2018 10:25

Field ID: 33020JD4

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1992723	EPA 180.1 Rev. 2.0	Turbidity	2.8		NTU	P345363	
1992725	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P345570	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.42		mg N/L	P345824	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.024		mg N/L	P345670	
	EPA 365.1 Rev. 2.0	Total-P	0.021		mg P/L	P345382	

Sample Location: Jones Creek at Old Corry Road

Collection Date/Time: 05/14/2018 10:50

Field ID: 33020118

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1992724	EPA 180.1 Rev. 2.0	Turbidity	3.4		NTU	P345363	
1992726	EPA 350.1 Rev. 2.0	Ammonia-N	0.039		mg N/L	P345570	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.28	I	mg N/L	P345824	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.13		mg N/L	P345670	
	EPA 365.1 Rev. 2.0	Total-P	0.028		mg P/L	P345382	

Sample Location: Jackson Creek at New Warrington Road

Collection Date/Time: 05/14/2018 11:40

Field ID: 33020222

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1992727	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P345363	
1992728	EPA 350.1 Rev. 2.0	Ammonia-N	0.014		mg N/L	P345569	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.24		mg N/L	P345979	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.8		mg N/L	P345412	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P345445	

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P345362

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P345363

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P345568

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P345569

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P345570

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345824

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345979

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P346212

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345411

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345412

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345670

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P345741

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P345382

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P345445

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

Reference Method: EPA 8321B
 Batch ID: P345129

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
 Batch ID: P345194

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	0.030	I	ug/L
Fluridone	4.0E-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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P345568

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P345569

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P345570

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345824

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345979

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P346212

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	95.4		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345411

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345412

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345670

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	98.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345741

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P345382

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P345445

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

Reference Method: EPA 8321B
Batch ID: P345129

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

Reference Method: EPA 8321B
Batch ID: P345194

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	90.0		P	40 - 150
Acetaminophen	98.3		P	30 - 150
Bentazon	79.5		P	30 - 150
Carbamazepine	61.5		P	40 - 150
Diuron	62.2		P	40 - 150
Fenuron	96.2		P	40 - 150
Fluridone	83.0		P	40 - 150
Hydrocodone	98.8		P	40 - 150
Imazapyr	85.6		P	40 - 150
Imidacloprid	102		P	40 - 160
Linuron	97.2		P	40 - 150
MCPP	96.7		P	40 - 150
Primidone	98.1		P	40 - 150
Pyraclostrobin	66.3		P	40 - 150
Triclopyr	94.9		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P345568

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992646	Ammonia-N	95.2	97.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P345569

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992720	Ammonia-N	97.8	100	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P345570

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992716	Ammonia-N	98.1	99.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345824

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992443	Kjeldahl Nitrogen	96.6	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345979

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992720	Kjeldahl Nitrogen	93.5	96.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P346212

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992643	Kjeldahl Nitrogen	95.1	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345411

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992617	NO2NO3-N	97.7	98.7	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345412

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992747	NO2NO3-N	99.0	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345670

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992716	NO2NO3-N	97.5	98.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345741

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1994060	NO2NO3-N	97.0	97.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P345382

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992443	Total-P	91.5	95.5	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P345445

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992779	Total-P	103	105	P/P	90 - 110

Reference Method: EPA 8321B
 Batch ID: P345129

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992563	Sucralose	111	107	P/P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P345194

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992331	2,4-D	76.0	72.8	P/P	40 - 150
1992331	Acetaminophen	95.0	92.5	P/P	30 - 150
1992331	Bentazon	45.6	44.3	P/P	30 - 150
1992331	Carbamazepine	53.4	56.7	P/P	40 - 150
1992331	Diuron	52.4	55.3	P/P	40 - 150
1992331	Fenuron	85.2	91.1	P/P	40 - 150
1992331	Fluridone	75.3	77.3	P/P	40 - 150
1992331	Hydrocodone	106	109	P/P	40 - 150
1992331	Imazapyr	100	99.6	P/P	40 - 150
1992331	Imidacloprid	152	159	P/P	40 - 160
1992331	Linuron	92.3	91.6	P/P	40 - 150
1992331	MCP	74.5	71.5	P/P	40 - 150
1992331	Primidone	103	111	P/P	40 - 150
1992331	Pyraclostrobin	72.0	71.6	P/P	40 - 150
1992331	Triclopyr	81.1	73.8	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P345362

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992717	Turbidity	2.71	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P345363

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992774	Turbidity	4.76	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P345568

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992646	Ammonia-N	2.12	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P345569

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992720	Ammonia-N	1.84	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P345570

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992716	Ammonia-N	0.847	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345824

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992443	Kjeldahl Nitrogen	5.79	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345979

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992720	Kjeldahl Nitrogen	2.28	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P346212

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992643	Kjeldahl Nitrogen	2.65	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345411

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992617	NO2NO3-N	0.909	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345412

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992747	NO2NO3-N	0.954	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345670

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992716	NO2NO3-N	0.571	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P345741

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1994060	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P345382

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992443	Total-P	4.03	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P345445

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992779	Total-P	2.09	Spike	P	0 - 20

Reference Method: EPA 8321B
 Batch ID: P345129

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992563	Sucralose	3.82	Spike	P	0 - 30

Reference Method: EPA 8321B
 Batch ID: P345194

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992331	2,4-D	4.28	Spike	P	0 - 30
1992331	Acetaminophen	2.60	Spike	P	0 - 30
1992331	Bentazon	3.03	Spike	P	0 - 30
1992331	Carbamazepine	5.92	Spike	P	0 - 30
1992331	Diuron	5.45	Spike	P	0 - 30
1992331	Fenuron	6.70	Spike	P	0 - 30
1992331	Fluridone	2.63	Spike	P	0 - 30
1992331	Hydrocodone	2.28	Spike	P	0 - 30
1992331	Imazapyr	0.862	Spike	P	0 - 30
1992331	Imidacloprid	4.18	Spike	P	0 - 30
1992331	Linuron	0.702	Spike	P	0 - 30
1992331	MCP	4.22	Spike	P	0 - 30
1992331	Primidone	7.32	Spike	P	0 - 30
1992331	Pyraclostrobin	0.568	Spike	P	0 - 30
1992331	Triclopyr	9.45	Spike	P	0 - 30

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
 Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Surrogates

Quality Assurance Report Surrogates

Lab Sample ID: 1992729
Field Sample ID: 33020JF1

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	64.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	88.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	54.2	P	30 - 160
EPA 8321B	Diuron-d6	51.8	P	30 - 160
EPA 8321B	Primidone-d5	119	P	30 - 160
EPA 8321B	Sucralose-d6	92.8	P	40 - 160

Lab Sample ID: 1992730
Field Sample ID: 33020JF1_DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	41.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	81.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	45.9	P	30 - 160
EPA 8321B	Diuron-d6	51.1	P	30 - 160
EPA 8321B	Primidone-d5	96.3	P	30 - 160
EPA 8321B	Sucralose-d6	134	P	40 - 160

Lab Sample ID: 1992731
Field Sample ID: 33020JE20

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	42.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	90.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	54.4	P	30 - 160
EPA 8321B	Diuron-d6	55.6	P	30 - 160
EPA 8321B	Primidone-d5	117	P	30 - 160
EPA 8321B	Sucralose-d6	98.8	P	40 - 160

Lab Sample ID: 1992732
Field Sample ID: 33020117

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	72.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	97.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	52.4	P	30 - 160
EPA 8321B	Diuron-d6	51.9	P	30 - 160
EPA 8321B	Primidone-d5	110	P	30 - 160
EPA 8321B	Sucralose-d6	110	P	40 - 160

Lab Sample ID: 1992733
Field Sample ID: 33020221

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	46.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	100	P	30 - 160
EPA 8321B	Carbamazepine-d10	58.3	P	30 - 160
EPA 8321B	Diuron-d6	58.0	P	30 - 160
EPA 8321B	Primidone-d5	119	P	30 - 160
EPA 8321B	Sucralose-d6	131	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A83908

Included Lab Sample IDs: 1992711, 1992712, 1992713, 1992717, 1992718, 1992721, 1992723, 1992724, 1992727

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A83934

Included Lab Sample IDs: 1992714, 1992715, 1992720, 1992728

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

Reference Method: EPA 8321B

Run ID: A83978

Included Lab Sample IDs: 1992729, 1992730, 1992731, 1992732, 1992733

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	105	114	P/P	60 - 160
Sucralose	99.5	105	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A84010

Included Lab Sample IDs: 1992714, 1992715, 1992716, 1992719, 1992720, 1992722, 1992725, 1992726, 1992728

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.9	97.7	P/P	90 - 110
Ammonia-N	99.9	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A84048

Included Lab Sample IDs: 1992714, 1992715, 1992716, 1992719, 1992720, 1992722, 1992725, 1992726, 1992728

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	102	P/P	90 - 110
Total-P	102	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A84050

Included Lab Sample IDs: 1992716, 1992722, 1992725, 1992726

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	97.5	97.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A84080

Included Lab Sample IDs: 1992719

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A84147

Included Lab Sample IDs: 1992716, 1992722, 1992725, 1992726

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.1	97.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A84200

Included Lab Sample IDs: 1992719, 1992720, 1992728

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.1	102	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A84229

Included Lab Sample IDs: 1992729, 1992730, 1992731, 1992732, 1992733

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	80.4	81.4	P/P	50 - 150
2,4-D	81.4	73.4	P/P	50 - 150
Acetaminophen	81.4	93.9	P/P	60 - 150
Acetaminophen	93.9	101	P/P	60 - 150
Bentazon	92.0	93.1	P/P	50 - 150
Bentazon	93.1	109	P/P	50 - 150
Carbamazepine	73.1	87.2	P/P	60 - 150
Carbamazepine	87.2	98.8	P/P	60 - 150
Diuron	80.2	90.4	P/P	60 - 150
Diuron	90.4	99.8	P/P	60 - 150
Fenuron	89.9	99.9	P/P	60 - 150
Fenuron	99.9	100	P/P	60 - 150
Fluridone	92.4	94.6	P/P	60 - 160
Fluridone	94.6	107	P/P	60 - 160
Hydrocodone	101	100	P/P	60 - 150
Hydrocodone	91.0	101	P/P	60 - 150
Imazapyr	105	98.2	P/P	50 - 150
Imazapyr	98.2	102	P/P	50 - 150
Imidacloprid	79.3	98.1	P/P	60 - 150
Imidacloprid	98.1	90.0	P/P	60 - 150
Linuron	102	116	P/P	60 - 150
Linuron	112	102	P/P	60 - 150
MCPP	81.0	89.8	P/P	50 - 150
MCPP	89.8	93.3	P/P	50 - 150
Primidone	102	98.1	P/P	60 - 150
Primidone	89.3	102	P/P	60 - 150
Pyraclostrobin	101	93.8	P/P	60 - 150
Pyraclostrobin	93.8	98.7	P/P	60 - 150
Triclopyr	74.1	83.5	P/P	50 - 160
Triclopyr	83.5	83.0	P/P	50 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A84322

Included Lab Sample IDs: 1992714, 1992715

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.2	98.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

* 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					2.71	
	Turbidity					4.76	
EPA 350.1 Rev. 2.0	Ammonia-N	103	95.2	97.8			2.12
	Ammonia-N	102	97.8	100			1.84
	Ammonia-N	104	98.1	99.3			0.847
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100	96.6	104			5.79
	Kjeldahl Nitrogen	105	93.5	96.2			2.28
	Kjeldahl Nitrogen	95.4	95.1	100			2.65
EPA 353.2 Rev. 2.0	NO2NO3-N	102	97.7	98.7			0.909
	NO2NO3-N	102	99.0	100			0.954
	NO2NO3-N	98.5	97.5	98.5			0.571
	NO2NO3-N	102	97.0	97.0			0.0
EPA 365.1 Rev. 2.0	Total-P	102	91.5	95.5			4.03
	Total-P	101	103	105			2.09
EPA 8321B	2,4-D	90.0	76.0	72.8			4.28
	Acetaminophen	98.3	95.0	92.5			2.60
	Bentazon	79.5	45.6	44.3			3.03
	Carbamazepine	61.5	53.4	56.7			5.92
	Diuron	62.2	52.4	55.3			5.45
	Fenuron	96.2	85.2	91.1			6.70
	Fluridone	83.0	75.3	77.3			2.63
	Hydrocodone	98.8	106	109			2.28
	Imazapyr	85.6	100	99.6			0.862
	Imidacloprid	102	152	159			4.18
	Linuron	97.2	92.3	91.6			0.702
	MCP	96.7	74.5	71.5			4.22
	Primidone	98.1	103	111			7.32
	Pyraclostrobin	66.3	72.0	71.6			0.568
	Sucralose	113	111	107			3.82
	Triclopyr	94.9	81.1	73.8			9.45

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1992711, 1992712, 1992713, 1992717, 1992718, 1992721, 1992723, 1992724, 1992727
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1992714, 1992715, 1992716, 1992719, 1992720, 1992722, 1992725, 1992726, 1992728
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1992714, 1992715, 1992716, 1992719, 1992720, 1992722, 1992725, 1992726, 1992728
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1992714, 1992715, 1992716, 1992719, 1992720, 1992722, 1992725, 1992726, 1992728

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1992714, 1992715, 1992716, 1992719, 1992720, 1992722, 1992725, 1992726, 1992728
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1992729, 1992730, 1992731, 1992732, 1992733

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	05/15/2018			05/15/2018 15:35	William L. Brown IV	1992711, 1992712, 1992713, 1992717, 1992718, 1992721, 1992723, 1992724, 1992727
EPA 350.1 Rev. 2.0	05/15/2018			05/18/2018 10:57	Ping Hua	1992714
	05/15/2018			05/18/2018 10:58	Ping Hua	1992715
	05/15/2018			05/18/2018 11:00	Ping Hua	1992719
	05/15/2018			05/18/2018 11:04	Ping Hua	1992720
	05/15/2018			05/18/2018 11:09	Ping Hua	1992728
	05/15/2018			05/18/2018 11:38	Ping Hua	1992716
	05/15/2018			05/18/2018 11:42	Ping Hua	1992722
	05/15/2018			05/18/2018 11:44	Ping Hua	1992725
	05/15/2018			05/18/2018 11:45	Ping Hua	1992726
EPA 351.2 Rev. 2.0	05/15/2018	05/23/2018 16:00	Adrian Shelby	05/24/2018 14:22	Joseph Suarez	1992716
	05/15/2018	05/23/2018 16:00	Adrian Shelby	05/24/2018 14:23	Joseph Suarez	1992722
	05/15/2018	05/23/2018 16:00	Adrian Shelby	05/24/2018 14:25	Joseph Suarez	1992725
	05/15/2018	05/23/2018 16:00	Adrian Shelby	05/24/2018 14:26	Joseph Suarez	1992726
	05/15/2018	05/25/2018 11:00	Adrian Shelby	05/29/2018 11:20	Joseph Suarez	1992719
	05/15/2018	05/25/2018 11:00	Adrian Shelby	05/29/2018 11:22	Joseph Suarez	1992720
	05/15/2018	05/25/2018 11:00	Adrian Shelby	05/29/2018 11:26	Joseph Suarez	1992728
	05/15/2018	05/31/2018 18:10	Adrian Shelby	06/04/2018 12:27	Joseph Suarez	1992714
	05/15/2018	05/31/2018 18:10	Adrian Shelby	06/04/2018 12:29	Joseph Suarez	1992715
EPA 353.2 Rev. 2.0	05/15/2018			05/16/2018 13:07	Lauren Bottorf	1992714
	05/15/2018			05/16/2018 13:08	Lauren Bottorf	1992715
	05/15/2018			05/16/2018 13:31	Lauren Bottorf	1992720
	05/15/2018			05/16/2018 13:37	Lauren Bottorf	1992728
	05/15/2018			05/21/2018 11:49	Lauren Bottorf	1992716
	05/15/2018			05/21/2018 11:59	Lauren Bottorf	1992722
	05/15/2018			05/21/2018 12:00	Lauren Bottorf	1992725
	05/15/2018			05/21/2018 12:02	Lauren Bottorf	1992726
	05/15/2018			05/22/2018 14:14	Lauren Bottorf	1992719
EPA 365.1 Rev. 2.0	05/15/2018	05/16/2018 08:57	Sima Feizi	05/21/2018 12:24	Beverly Y. Sanders	1992716
	05/15/2018	05/16/2018 08:57	Sima Feizi	05/21/2018 12:25	Beverly Y. Sanders	1992722
	05/15/2018	05/16/2018 08:57	Sima Feizi	05/21/2018 12:26	Beverly Y. Sanders	1992725
	05/15/2018	05/16/2018 08:57	Sima Feizi	05/21/2018 12:27	Beverly Y. Sanders	1992726
	05/15/2018	05/16/2018 08:57	Sima Feizi	05/21/2018 13:27	Beverly Y. Sanders	1992714
	05/15/2018	05/16/2018 08:57	Sima Feizi	05/21/2018 13:28	Beverly Y. Sanders	1992715
	05/15/2018	05/16/2018 08:57	Sima Feizi	05/21/2018 13:29	Beverly Y. Sanders	1992719
	05/15/2018	05/16/2018 08:57	Sima Feizi	05/21/2018 13:30	Beverly Y. Sanders	1992720
	05/15/2018	05/16/2018 08:57	Sima Feizi	05/21/2018 13:31	Beverly Y. Sanders	1992728
EPA 8321B	05/15/2018	05/16/2018 09:00	Juyoung Kim	05/16/2018 12:54	Juyoung Kim	1992729

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	05/15/2018	05/16/2018 09:00	Juyoung Kim	05/16/2018 13:13	Juyoung Kim	1992730
	05/15/2018	05/16/2018 09:00	Juyoung Kim	05/16/2018 13:50	Juyoung Kim	1992731
	05/15/2018	05/16/2018 09:00	Juyoung Kim	05/16/2018 14:09	Juyoung Kim	1992732
	05/15/2018	05/16/2018 09:00	Juyoung Kim	05/16/2018 14:27	Juyoung Kim	1992733
	05/15/2018	05/16/2018 10:00	Hoor Shaik	05/17/2018 01:58	Juyoung Kim	1992729
	05/15/2018	05/16/2018 10:00	Hoor Shaik	05/17/2018 03:08	Juyoung Kim	1992730
	05/15/2018	05/16/2018 10:00	Hoor Shaik	05/17/2018 03:42	Juyoung Kim	1992731
	05/15/2018	05/16/2018 10:00	Hoor Shaik	05/17/2018 04:17	Juyoung Kim	1992732
	05/15/2018	05/16/2018 10:00	Hoor Shaik	05/17/2018 04:52	Juyoung Kim	1992733
	05/15/2018	05/16/2018 10:00	Hoor Shaik	05/17/2018 18:07	Juyoung Kim	1992729
	05/15/2018	05/16/2018 10:00	Hoor Shaik	05/17/2018 19:17	Juyoung Kim	1992730
	05/15/2018	05/16/2018 10:00	Hoor Shaik	05/17/2018 19:51	Juyoung Kim	1992731
	05/15/2018	05/16/2018 10:00	Hoor Shaik	05/17/2018 20:26	Juyoung Kim	1992732
	05/15/2018	05/16/2018 10:00	Hoor Shaik	05/17/2018 21:01	Juyoung Kim	1992733