

Chemical Analysis Report

NE-DIST-2018-09-27-01

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

Event Description: **LSJR West 1 2018**
Request ID: **RQ-2018-09-24-09**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Suite 100
Jacksonville, FL 32256-7577
Attn: Jeremy Parrish

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Liang Lin, Environmental Administrator

Date Certified: 22-OCT-2018 15:23

A handwritten signature in black ink, appearing to read "Liang Lin", is shown on a light-colored background.

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: MCCOY CR AT MYRTLE AVE

Collection Date/Time: 09/26/2018 09:05

Field ID: 20030693

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2028733	EPA 8321B	2,4-D	0.092		ug/L	P352307	
		Bentazon	0.0054		ug/L	P352307	MS
		MCP	0.0020	U	ug/L	P352307	
		Triclopyr**	0.0040	U	ug/L	P352307	
		Imidacloprid	0.043		ug/L	P352307	
		Diuron	0.0079	I	ug/L	P352307	
		Pyraclostrobin**	0.0020	U	ug/L	P352307	
		Primidone**	0.0040	U	ug/L	P352307	
		Linuron	0.0040	U	ug/L	P352307	
		Acetaminophen**	0.019	I	ug/L	P352307	
		Fenuron	0.016	U	ug/L	P352307	
		Imazapyr**	0.44		ug/L	P352307	
		Carbamazepine**	8.0E-04	U	ug/L	P352307	
		Fluridone**	0.030		ug/L	P352307	
		Hydrocodone**	8.0E-04	U	ug/L	P352307	
		Naproxen**	0.0080	U	ug/L	P352307	
		Ibuprofen**	0.020	U	ug/L	P352307	
		Sucralose**	0.20		ug/L	P352201	
		Acesulfame K**	0.10	U	ug/L	P352201	

Ref. Method and Comment:

EPA 8321B: MS accuracy for imazapyr and imidacloprid could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Wills Br. North Fork at Old Middleburg Rd.

Collection Date/Time: 09/26/2018 10:20

Field ID: 20030582

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2028709	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P352472	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P352630	
		Sulfate	21		mg SO4/L	P352632	
		Color (true)	47		PCU	P352383	
	SM 2320 B-97	Total Alkalinity	71		mg CaCO3/L	P352645	
	SM 2540 C-97	TDS	152		mg/L	P353176	
	SM 2540 D-97	TSS	2	U	mg/L	P353074	
	SM 4500 F-C-97	Fluoride	0.062	I	mg F/L	P352650	
2028711	EPA 350.1 Rev. 2.0	Ammonia-N	0.036		mg N/L	P352719	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.35		mg N/L	P352484	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.35		mg N/L	P352492	
	EPA 365.1 Rev. 2.0	Total-P	0.049		mg P/L	P352460	
	SM 5310 B-00	Organic Carbon	8.0		mg C/L	P352975	
2028713	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.032		mg P/L	P352432	
2028731	EPA 8321B	Sucralose**	0.31		ug/L	P352201	
		Acesulfame K**	0.10	U	ug/L	P352201	

Ref. Method and Comment:

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

SM 4500 F-C-97: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: WILLIAMSON CREEK AT HUGH EDWARDS

Collection Date/Time: 09/26/2018 11:30

Field ID: 20030429

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2028734	EPA 8321B	2,4-D	0.0020	U	ug/L	P352307	
		Bentazon	8.8E-04	I	ug/L	P352307	MS
		MCP	0.0020	U	ug/L	P352307	
		Triclopyr**	0.0040	U	ug/L	P352307	
		Imidacloprid	0.013		ug/L	P352307	
		Diuron	0.0020	U	ug/L	P352307	
		Pyraclostrobin**	0.0020	U	ug/L	P352307	
		Primidone**	0.0040	U	ug/L	P352307	
		Linuron	0.0040	U	ug/L	P352307	
		Acetaminophen**	0.0080	U	ug/L	P352307	
		Fenuron	0.016	U	ug/L	P352307	
		Imazapyr**	3.0		ug/L	P352307	
		Carbamazepine**	8.0E-04	U	ug/L	P352307	
		Fluridone**	0.021		ug/L	P352307	
		Hydrocodone**	8.0E-04	U	ug/L	P352307	
		Naproxen**	0.0080	U	ug/L	P352307	
		Ibuprofen**	0.020	U	ug/L	P352307	
		Sucralose**	0.27		ug/L	P352201	
		Acesulfame K**	0.10	U	ug/L	P352201	

Ref. Method and Comment:

EPA 8321B: MS accuracy for imazapyr and imidacloprid could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Wills Br. at Lane Ave.

Collection Date/Time: 09/26/2018 10:45

Field ID: 20030095

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2028735	EPA 8321B	2,4-D	0.097		ug/L	P352307	
		Bentazon	0.0039		ug/L	P352307	MS
		MCP	0.013		ug/L	P352307	
		Triclopyr**	0.0040	U	ug/L	P352307	
		Imidacloprid	0.020		ug/L	P352307	
		Diuron	0.0078	I	ug/L	P352307	
		Pyraclostrobin**	0.0020	U	ug/L	P352307	
		Primidone**	0.0044	I	ug/L	P352307	
		Linuron	0.0040	U	ug/L	P352307	
		Acetaminophen**	0.014	I	ug/L	P352307	
		Fenuron	0.016	U	ug/L	P352307	
		Imazapyr**	0.28		ug/L	P352307	
		Carbamazepine**	9.8E-04	I	ug/L	P352307	
		Fluridone**	0.0087		ug/L	P352307	
		Hydrocodone**	8.0E-04	U	ug/L	P352307	
		Naproxen**	0.0080	U	ug/L	P352307	
		Ibuprofen**	0.020	U	ug/L	P352307	
		Sucralose**	0.44		ug/L	P352201	
		Acesulfame K**	0.10	U	ug/L	P352201	

Ref. Method and Comment:

EPA 8321B: MS accuracy for imazapyr and imidacloprid could not be assessed due to high concentration of parameter in the spiked sample.

**Sample Location: Williamson Creek at Jammes Road,
Jacksonville**

Collection Date/Time: 09/26/2018 11:10

Field ID: 20030618

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2028710	EPA 180.1 Rev. 2.0	Turbidity	3.0		NTU	P352472	
	EPA 300.0 Rev. 2.1	Chloride	16		mg Cl/L	P352630	
		Sulfate	16		mg SO4/L	P352632	
	SM 2120 B	Color (true)	40		PCU	P352383	
	SM 2320 B-97	Total Alkalinity	75		mg CaCO3/L	P352905	
	SM 2540 C-97	TDS	140		mg/L	P353176	
	SM 2540 D-97	TSS	2	U	mg/L	P353074	
	SM 4500 F-C-97	Fluoride	0.074	I	mg F/L	P352723	
2028712	EPA 350.1 Rev. 2.0	Ammonia-N	0.071		mg N/L	P352720	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.38		mg N/L	P352484	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.17		mg N/L	P352492	
	EPA 365.1 Rev. 2.0	Total-P	0.065		mg P/L	P352460	
	SM 5310 B-00	Organic Carbon	7.1		mg C/L	P352975	
2028714	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.041		mg P/L	P352433	
2028732	EPA 8321B	Sucralose**	0.35		ug/L	P352201	
		Acesulfame K**	0.10	U	ug/L	P352201	

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: WILLIAMSON CREEK AT HUGH EDWARDS

Collection Date/Time: 09/26/2018 11:33

Field ID: 20030429DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2028736	EPA 8321B	2,4-D	0.0020	U	ug/L	P352307	
		Bentazon	7.9E-04	T	ug/L	P352307	MS
		MCP	0.0020	U	ug/L	P352307	
		Triclopyr**	0.0040	U	ug/L	P352307	
		Imidacloprid	0.015		ug/L	P352307	
		Diuron	0.0020	U	ug/L	P352307	
		Pyraclostrobin**	0.0020	U	ug/L	P352307	
		Primidone**	0.0040	U	ug/L	P352307	
		Linuron	0.0040	U	ug/L	P352307	
		Acetaminophen**	0.0080	U	ug/L	P352307	
		Fenuron	0.016	U	ug/L	P352307	
		Imazapyr**	3.6		ug/L	P352307	
		Carbamazepine**	8.0E-04	U	ug/L	P352307	
		Fluridone**	0.024		ug/L	P352307	
		Hydrocodone**	8.0E-04	U	ug/L	P352307	
		Naproxen**	0.0080	U	ug/L	P352307	
		Ibuprofen**	0.020	U	ug/L	P352307	
		Sucralose**	0.29		ug/L	P352201	
		Acesulfame K**	0.10	U	ug/L	P352201	

Ref. Method and Comment:

EPA 8321B: MS accuracy for imazapyr and imidacloprid could not be assessed due to high concentration of parameter in the spiked sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P352472

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352630

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352632

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352719

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352720

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352484

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352492

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P352460

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352432

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352433

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

Reference Method: EPA 8321B
Batch ID: P352201

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

Reference Method: EPA 8321B
Batch ID: P352307

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	4.0E-04	U	ug/L
Hydrocodone	8.0E-04	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B
Batch ID: P352383

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P352645

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

Reference Method: SM 2320 B-97
Batch ID: P352905

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-97
Batch ID: P353176

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P353074

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P352650

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P352723

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P352975

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352630

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	97.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352632

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	95.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352719

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352720

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.9		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352484

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	107		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352492

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: P352460

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352432

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352433

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P352201

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	76.8		P	40 - 150
Sucralose	107		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P352307

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	96.7		P	40 - 150
Acetaminophen	87.4		P	30 - 150
Bentazon	86.5		P	30 - 150
Carbamazepine	79.3		P	40 - 150
Diuron	69.4		P	40 - 150
Fenuron	98.8		P	40 - 150
Fluridone	98.5		P	40 - 150
Hydrocodone	105		P	40 - 150
Ibuprofen	99.6		P	40 - 150
Imazapyr	69.5		P	40 - 150
Imidacloprid	86.1		P	40 - 160
Linuron	68.1		P	40 - 150
MCPP	95.8		P	40 - 150
Naproxen	86.1		P	40 - 150
Primidone	84.9		P	40 - 150
Pyraclostrobin	85.1		P	40 - 150
Triclopyr	93.6		P	40 - 150

Reference Method: SM 2120 B
Batch ID: P352383

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.5		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P352645

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 107

Reference Method: SM 2320 B-97
Batch ID: P352905

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P352650

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.6		P	91 - 105

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P352723

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.8		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P352975

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352630

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2028558	Chloride	100		P	90 - 110
2028648	Chloride	99.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352632

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2028558	Sulfate	98.3		P	90 - 110
2028648	Sulfate	99.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352719

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2028620	Ammonia-N	98.5	99.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352720

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2028751	Ammonia-N	103	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352484

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2028651	Kjeldahl Nitrogen	111	110	F/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352492

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2028650	NO2NO3-N	99.2	98.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P352460

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2028711	Total-P	101	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352432

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2028713	O-Phosphate-P	98.1	99.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352433

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2028714	O-Phosphate-P	99.1	97.7	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P352201

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2028139	Acesulfame K	78.4	74.1	P/P	40 - 150
2028139	Sucralose	105	103	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P352307

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2028285	2,4-D	110	98.3	P/P	40 - 150
2028285	Acetaminophen	82.1	86.8	P/P	30 - 150
2028285	Bentazon	15.1	15.3	F/F	30 - 150
2028285	Carbamazepine	64.3	67.4	P/P	40 - 150
2028285	Diuron	57.1	56.7	P/P	40 - 150
2028285	Fenuron	88.0	80.5	P/P	40 - 150
2028285	Fluridone	101	108	P/P	40 - 150
2028285	Hydrocodone	112	112	P/P	40 - 150
2028285	Ibuprofen	77.7	74.8	P/P	40 - 150
2028285	Linuron	56.4	61.6	P/P	40 - 150
2028285	MCP	116	111	P/P	40 - 150
2028285	Naproxen	74.9	76.6	P/P	40 - 150
2028285	Primidone	97.6	92.3	P/P	40 - 150
2028285	Pyraclostrobin	87.1	81.0	P/P	40 - 150
2028285	Triclopyr	118	109	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P352723

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2029484	Fluoride	100	99.2	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P352975

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2028617	Organic Carbon	97.8	95.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P352472

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028706	Turbidity	4.89	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352630

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028558	Chloride	0.252	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352632

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028558	Sulfate	0.849	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352719

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028620	Ammonia-N	0.718	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352720

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028751	Ammonia-N	0.108	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352484

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028651	Kjeldahl Nitrogen	0.643	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352492

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028650	NO2NO3-N	0.482	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P352460

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028711	Total-P	1.76	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352432

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028713	O-Phosphate-P	0.921	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352433

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028714	O-Phosphate-P	1.00	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P352201

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028139	Acesulfame K	5.58	Spike	P	0 - 30
2028139	Sucralose	1.19	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P352307

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028285	2,4-D	9.06	Spike	P	0 - 30
2028285	Acetaminophen	5.53	Spike	P	0 - 30
2028285	Bentazon	6.07	Spike	P	0 - 30
2028285	Carbamazepine	4.48	Spike	P	0 - 30
2028285	Diuron	0.802	Spike	P	0 - 30
2028285	Fenuron	8.83	Spike	P	0 - 30
2028285	Fluridone	6.68	Spike	P	0 - 30
2028285	Hydrocodone	0.739	Spike	P	0 - 30
2028285	Ibuprofen	3.82	Spike	P	0 - 30
2028285	Imazapyr	3.58	Spike	P	0 - 30
2028285	Imidacloprid	5.21	Spike	P	0 - 30
2028285	Linuron	8.86	Spike	P	0 - 30
2028285	MCPP	4.36	Spike	P	0 - 30
2028285	Naproxen	2.35	Spike	P	0 - 30
2028285	Primidone	5.08	Spike	P	0 - 30
2028285	Pyraclostrobin	7.29	Spike	P	0 - 30
2028285	Triclopyr	7.62	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P352383

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028706	Color (true)	1.70	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
Batch ID: P352645

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028706	Total Alkalinity	0.0871	Sample	P	0 - 1.6

Reference Method: SM 2320 B-97
Batch ID: P352905

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2029484	Total Alkalinity	0.0763	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P353176

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028744	TDS	0.0	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P352650

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028706	Fluoride	0.0	Spike	P	0 - 3.5

Reference Method: SM 4500 F-C-97
Batch ID: P352723

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2029484	Fluoride	0.983	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P352975

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028617	Organic Carbon	1.24	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: 2028731
Field Sample ID: 20030582

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Endothall-d6	113	P	40 - 160
EPA 8321B	Sucralose-d6	136	P	40 - 160

Lab Sample ID: 2028732
Field Sample ID: 20030618

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Endothall-d6	97.7	P	40 - 160
EPA 8321B	Sucralose-d6	118	P	40 - 160

Lab Sample ID: 2028733
Field Sample ID: 20030693

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	79.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	102	P	30 - 160
EPA 8321B	Carbamazepine-d10	64.2	P	30 - 160
EPA 8321B	Diuron-d6	49.9	P	30 - 160
EPA 8321B	Endothall-d6	103	P	40 - 160
EPA 8321B	Ibuprofen-d3	62.1	P	30 - 160
EPA 8321B	Primidone-d5	104	P	30 - 160
EPA 8321B	Sucralose-d6	124	P	40 - 160

Lab Sample ID: 2028734
Field Sample ID: 20030429

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	80.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	84.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	60.8	P	30 - 160
EPA 8321B	Diuron-d6	51.0	P	30 - 160
EPA 8321B	Endothall-d6	101	P	40 - 160
EPA 8321B	Ibuprofen-d3	72.9	P	30 - 160
EPA 8321B	Primidone-d5	86.4	P	30 - 160
EPA 8321B	Sucralose-d6	125	P	40 - 160

Lab Sample ID: 2028735
Field Sample ID: 20030095

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	82.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	90.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	59.4	P	30 - 160
EPA 8321B	Diuron-d6	45.7	P	30 - 160
EPA 8321B	Endothall-d6	104	P	40 - 160
EPA 8321B	Ibuprofen-d3	64.8	P	30 - 160
EPA 8321B	Primidone-d5	92.9	P	30 - 160
EPA 8321B	Sucralose-d6	118	P	40 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2028736

Field Sample ID: 20030429DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	76.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	110	P	30 - 160
EPA 8321B	Carbamazepine-d10	67.9	P	30 - 160
EPA 8321B	Diuron-d6	57.9	P	30 - 160
EPA 8321B	Endothall-d6	96.9	P	40 - 160
EPA 8321B	Ibuprofen-d3	65.1	P	30 - 160
EPA 8321B	Primidone-d5	104	P	30 - 160
EPA 8321B	Sucralose-d6	122	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A86754

Included Lab Sample IDs: 2028709, 2028710

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.4	97.3	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A86767

Included Lab Sample IDs: 2028713, 2028714

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.7	99.8	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A86787

Included Lab Sample IDs: 2028709, 2028710

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A86790

Included Lab Sample IDs: 2028711, 2028712

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

Reference Method: EPA 8321B

Run ID: A86795

Included Lab Sample IDs: 2028731, 2028732, 2028733, 2028734, 2028735, 2028736

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	110	101	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A86798

Included Lab Sample IDs: 2028731, 2028732, 2028733, 2028734, 2028735, 2028736

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	69.9	70.6	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A86818

Included Lab Sample IDs: 2028733, 2028734, 2028735, 2028736

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	106	82.7	P/P	50 - 150
Acetaminophen	89.1	89.5	P/P	60 - 160
Bentazon	98.8	86.0	P/P	50 - 160
Carbamazepine	94.0	96.6	P/P	60 - 160
Diuron	96.5	86.7	P/P	60 - 150
Fenuron	96.5	101	P/P	60 - 150
Fluridone	127	130	P/P	60 - 160
Hydrocodone	113	113	P/P	60 - 150
Ibuprofen	109	111	P/P	50 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A86818

Included Lab Sample IDs: 2028733, 2028734, 2028735, 2028736

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Imazapyr	87.5	86.7	P/P	50 - 150
Imidacloprid	90.1	97.8	P/P	60 - 150
Linuron	94.9	91.3	P/P	60 - 150
MCPP	97.0	77.4	P/P	50 - 150
Naproxen	93.6	73.7	P/P	50 - 160
Primidone	80.2	92.7	P/P	60 - 150
Pyraclostrobin	117	110	P/P	60 - 150
Triclopyr	96.5	69.1	P/P	50 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A86819

Included Lab Sample IDs: 2028711, 2028712

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A86831

Included Lab Sample IDs: 2028711

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A86833

Included Lab Sample IDs: 2028712

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A86839

Included Lab Sample IDs: 2028709, 2028710

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

Reference Method: SM 2320 B-97

Run ID: A86860

Included Lab Sample IDs: 2028709

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	105	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A86860

Included Lab Sample IDs: 2028709

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	97.6	99.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A86892

Included Lab Sample IDs: 2028710

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	103	105	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A86893

Included Lab Sample IDs: 2028711, 2028712

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

Reference Method: EPA 8321B

Run ID: A86931

Included Lab Sample IDs: 2028734, 2028736

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	94.9	88.7	P/P	60 - 160
Carbamazepine	99.7	101	P/P	60 - 160
Diuron	100	112	P/P	60 - 150
Fenuron	112	114	P/P	60 - 150
Fluridone	121	112	P/P	60 - 160
Hydrocodone	115	114	P/P	60 - 150
Imazapyr	96.3	74.6	P/P	50 - 150
Imidacloprid	93.3	95.9	P/P	60 - 150
Linuron	97.1	107	P/P	60 - 150
Primidone	95.8	118	P/P	60 - 150
Pyraclostrobin	105	102	P/P	60 - 150

Reference Method: SM 2320 B-97

Run ID: A86962

Included Lab Sample IDs: 2028710

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	103	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A86991

Included Lab Sample IDs: 2028711, 2028712

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.1	95.8	P/P	90 - 110

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 180.1 Rev. 2.0	Turbidity				4.89	
EPA 300.0 Rev. 2.1	Chloride	97.4	100	99.9	0.252	
	Sulfate	95.6	98.3	99.5	0.849	
EPA 350.1 Rev. 2.0	Ammonia-N	99.8	98.5	99.4		0.718
	Ammonia-N	96.9	103	102		0.108
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107	111	110		0.643
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100	99.2	98.7		0.482
EPA 365.1 Rev. 2.0	Total-P	106	101	103		1.76
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.8	98.1	99.3		0.921
	O-Phosphate-P	102	99.1	97.7		1.00
EPA 8321B	2,4-D	96.7	98.3	110		9.06
	Acesulfame K	76.8	78.4	74.1		5.58
	Acetaminophen	87.4	82.1	86.8		5.53
	Bentazon	86.5	15.1	15.3		6.07
	Carbamazepine	79.3	64.3	67.4		4.48
	Diuron	69.4	57.1	56.7		0.802
	Fenuron	98.8	88.0	80.5		8.83
	Fluridone	98.5	101	108		6.68
	Hydrocodone	105	112	112		0.739
	Ibuprofen	99.6	74.8	77.7		3.82
	Imazapyr	69.5				3.58
	Imidacloprid	86.1				5.21
	Linuron	68.1	56.4	61.6		8.86
	MCP	95.8	111	116		4.36
	Naproxen	86.1	76.6	74.9		2.35
	Primidone	84.9	97.6	92.3		5.08
	Pyraclostrobin	85.1	87.1	81.0		7.29
	Sucralose	107	105	103		1.19
	Triclopyr	93.6	109	118		7.62
SM 2120 B	Color (true)	99.5			1.70	
SM 2320 B-97	Total Alkalinity	103			0.0871	
	Total Alkalinity	103			0.0763	
SM 2540 C-97	TDS				0.0	
SM 4500 F-C-97	Fluoride	96.6				0.0
	Fluoride	99.8	100	99.2		0.983
SM 5310 B-00	Organic Carbon	97.8	97.8	95.5		1.24

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2028709, 2028710
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2028709, 2028710
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2028709, 2028710
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2028711, 2028712
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2028711, 2028712
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2028711, 2028712
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2028711, 2028712

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 365.1 Rev. 2.0 dissolved / E31780 EPA 8321B / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2028713, 2028714 2028731, 2028732, 2028733, 2028734, 2028735, 2028736
EPA 8321B / E31780 SM 2120 B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS True Color measured at 450 nm	2028733, 2028734, 2028735, 2028736 2028709, 2028710
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2028709, 2028710
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2028709, 2028710
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2028709, 2028710
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2028709, 2028710
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2028711, 2028712

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	09/27/2018			09/27/2018 15:54	Megan Treadwell	2028709, 2028710
EPA 300.0 Rev. 2.1	09/27/2018			10/03/2018 03:30	Lipi Saha	2028709
	09/27/2018			10/03/2018 03:42	Lipi Saha	2028710
EPA 350.1 Rev. 2.0	09/27/2018			10/02/2018 13:41	Ping Hua	2028711
	09/27/2018			10/02/2018 13:47	Ping Hua	2028712
EPA 351.2 Rev. 2.0	09/27/2018	09/28/2018 12:45	Adrian Shelby	10/01/2018 12:11	Joseph Suarez	2028711
	09/27/2018	09/28/2018 12:45	Adrian Shelby	10/01/2018 12:12	Joseph Suarez	2028712
EPA 353.2 Rev. 2.0	09/27/2018			09/28/2018 14:29	Lauren Bottorf	2028711
	09/27/2018			09/28/2018 14:31	Lauren Bottorf	2028712
EPA 365.1 Rev. 2.0	09/27/2018	09/28/2018 12:15	Sima Feizi	10/01/2018 09:24	Beverly Y. Sanders	2028712
	09/27/2018	09/28/2018 12:15	Sima Feizi	10/01/2018 14:05	Beverly Y. Sanders	2028711
EPA 365.1 Rev. 2.0 dissolved	09/27/2018			09/27/2018 15:08	Julia Storbeck	2028713
	09/27/2018			09/27/2018 15:12	Julia Storbeck	2028714
EPA 8321B	09/27/2018	09/28/2018 08:30	Mohammad Ghaffari	09/28/2018 18:56	Mohammad Ghaffari	2028731
	09/27/2018	09/28/2018 08:30	Mohammad Ghaffari	09/28/2018 19:11	Mohammad Ghaffari	2028732
	09/27/2018	09/28/2018 08:30	Mohammad Ghaffari	09/28/2018 19:26	Mohammad Ghaffari	2028733
	09/27/2018	09/28/2018 08:30	Mohammad Ghaffari	09/28/2018 19:40	Mohammad Ghaffari	2028734
	09/27/2018	09/28/2018 08:30	Mohammad Ghaffari	09/28/2018 19:55	Mohammad Ghaffari	2028735
	09/27/2018	09/28/2018 08:30	Mohammad Ghaffari	09/28/2018 20:10	Mohammad Ghaffari	2028736
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	09/27/2018	09/28/2018 08:30	Mohammad Ghaffari	09/29/2018 21:23	Mohammad Ghaffari	2028735
	09/27/2018	09/28/2018 08:30	Mohammad Ghaffari	09/29/2018 21:38	Mohammad Ghaffari	2028736
	09/27/2018	09/28/2018 09:00	Hoor Shaik	09/29/2018 20:35	Juyoung Kim	2028733
	09/27/2018	09/28/2018 09:00	Hoor Shaik	09/29/2018 21:09	Juyoung Kim	2028734
	09/27/2018	09/28/2018 09:00	Hoor Shaik	09/29/2018 21:44	Juyoung Kim	2028735
	09/27/2018	09/28/2018 09:00	Hoor Shaik	09/29/2018 22:19	Juyoung Kim	2028736
	09/27/2018	09/28/2018 09:00	Hoor Shaik	10/02/2018 07:26	Juyoung Kim	2028733
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	09/27/2018	09/28/2018 09:00	Hoor Shaik	10/04/2018 11:07	Juyoung Kim	2028734
	09/27/2018	09/28/2018 09:00	Hoor Shaik	10/04/2018 11:41	Juyoung Kim	2028734
	09/27/2018	09/28/2018 09:00	Hoor Shaik	10/04/2018 12:16	Juyoung Kim	2028736
	09/27/2018	09/28/2018 09:00	Hoor Shaik	10/04/2018 12:51	Juyoung Kim	2028736
SM 2120 B	09/27/2018			09/27/2018 14:09	DeAsia Armster	2028709
	09/27/2018			09/27/2018 14:10	DeAsia Armster	2028710
SM 2320 B-97	09/27/2018			10/02/2018 21:32	Dale L. Simmons	2028709
	09/27/2018			10/08/2018 00:01	Dale L. Simmons	2028710
SM 2540 C-97	09/27/2018			10/01/2018 11:35	DeAsia Armster	2028709, 2028710

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2540 D-97	09/27/2018			10/01/2018 11:35	DeAsia Armster	2028709, 2028710
SM 4500 F-C-97	09/27/2018			10/02/2018 21:32	Dale L. Simmons	2028709
	09/27/2018			10/03/2018 02:05	Dale L. Simmons	2028710
SM 5310 B-00	09/27/2018			10/04/2018 00:19	Megan Treadwell	2028711
	09/27/2018			10/04/2018 00:32	Megan Treadwell	2028712