

Chemical Analysis Report

NE-DIST-2018-07-19-01

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

Event Description: **bmap tribs 1**
Request ID: **RQ-2018-07-16-21**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 07-AUG-2018 16:42

A handwritten signature in black ink, appearing to read "Liang Lin", 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: 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: BUTCHER PEN CR AT WESCONNETT

Collection Date/Time: 07/18/2018 08:50

Field ID: 20030760

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2009060	EPA 180.1 Rev. 2.0	Turbidity	6.0		NTU	P348826	
	EPA 300.0 Rev. 2.1	Chloride	18		mg Cl/L	P349150	
		Sulfate	11		mg SO4/L	P349155	
	SM 2120 B	Color (true)	88		PCU	P348780	
	SM 2320 B-97	Total Alkalinity	102		mg CaCO3/L	P349026	
	SM 2540 C-97	TDS	179		mg/L	P349194	
	SM 2540 D-97	TSS	3	I	mg/L	P349171	
	SM 4500 F-C-97	Fluoride	0.13		mg F/L	P349030	
2009064	EPA 350.1 Rev. 2.0	Ammonia-N	0.21		mg N/L	P349157	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P348952	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.20		mg N/L	P348972	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P349560	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P349004	
2009068	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.083		mg P/L	P348786	
2009111	EPA 8321B	2,4-D	0.16		ug/L	P348626	
		Bentazon	0.013		ug/L	P348626	
		MCP	0.068		ug/L	P348626	MS
		Triclopyr**	0.0040	U	ug/L	P348626	MS
		Imidacloprid	0.035		ug/L	P348626	
		Diuron	0.0034	I	ug/L	P348626	
		Pyraclostrobin**	0.0020	U	ug/L	P348626	
		Primidone**	0.0040	U	ug/L	P348626	
		Linuron	0.0040	U	ug/L	P348626	
		Acetaminophen**	0.011	I	ug/L	P348626	
		Fenuron	0.016	U	ug/L	P348626	
		Imazapyr**	0.094		ug/L	P348626	
		Carbamazepine**	4.0E-04	U	ug/L	P348626	
		Fluridone**	4.9E-04	I	ug/L	P348626	
		Hydrocodone**	8.0E-04	U	ug/L	P348626	
		Naproxen**	0.0080	U	ug/L	P348626	
		Ibuprofen**	0.020	U	ug/L	P348626	
		Sucralose**	0.23		ug/L	P348754	

Ref. Method and Comment:

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: BUTCHER PEN CR @ CONFEDERATE PT ROAD

Collection Date/Time: 07/18/2018 09:20

Field ID: 20030082

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2009061	EPA 180.1 Rev. 2.0	Turbidity	9.2		NTU	P348826	
	EPA 300.0 Rev. 2.1	Chloride	11		mg Cl/L	P349150	
		Sulfate	8.9		mg SO4/L	P349155	
	SM 2120 B	Color (true)	68	A	PCU	P348781	
	SM 2320 B-97	Total Alkalinity	57		mg CaCO3/L	P349026	
	SM 2540 C-97	TDS	112		mg/L	P349195	
	SM 2540 D-97	TSS	8	I	mg/L	P349171	
	SM 4500 F-C-97	Fluoride	0.086	I	mg F/L	P349030	
2009065	EPA 350.1 Rev. 2.0	Ammonia-N	0.11		mg N/L	P349157	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.91		mg N/L	P348952	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P348972	
	EPA 365.1 Rev. 2.0	Total-P	0.19		mg P/L	P349420	
	SM 5310 B-00	Organic Carbon	9.9		mg C/L	P349004	
2009069	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.11		mg P/L	P348786	
2009112	EPA 8321B	2,4-D	0.54		ug/L	P348626	
		Bentazon	0.0088		ug/L	P348626	
		MCP	0.15		ug/L	P348626	MS
		Triclopyr**	0.0040	U	ug/L	P348626	MS
		Imidacloprid	0.066		ug/L	P348626	
		Diuron	0.0058	I	ug/L	P348626	
		Pyraclostrobin**	0.0020	U	ug/L	P348626	
		Primidone**	0.0040	U	ug/L	P348626	
		Linuron	0.0040	U	ug/L	P348626	
		Acetaminophen**	0.025	I	ug/L	P348626	
		Fenuron	0.016	U	ug/L	P348626	
		Imazapyr**	0.065		ug/L	P348626	
		Carbamazepine**	4.0E-04	U	ug/L	P348626	
		Fluridone**	6.5E-04	I	ug/L	P348626	
		Hydrocodone**	8.0E-04	U	ug/L	P348626	
		Naproxen**	0.0080	U	ug/L	P348626	
		Ibuprofen**	0.020	U	ug/L	P348626	
		Sucralose**	0.094		ug/L	P348754	

Ref. Method and Comment:

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: GOODBYS CR ABOVE WEST BRANCH AT SAN CLERC RD **Collection Date/Time: 07/18/2018 11:30**

Field ID: 20030891

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2009072	EPA 180.1 Rev. 2.0	Turbidity	4.8		NTU	P348827	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P349150	
		Sulfate	22		mg SO4/L	P349155	
	SM 2120 B	Color (true)	55		PCU	P348781	
	SM 2320 B-97	Total Alkalinity	99		mg CaCO3/L	P349027	
	SM 2540 C-97	TDS	190		mg/L	P349195	
	SM 2540 D-97	TSS	3	I	mg/L	P349172	
	SM 4500 F-C-97	Fluoride	0.13		mg F/L	P349031	
2009073	EPA 350.1 Rev. 2.0	Ammonia-N	0.063		mg N/L	P349157	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.71		mg N/L	P348953	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.18		mg N/L	P348973	
	EPA 365.1 Rev. 2.0	Total-P	0.087		mg P/L	P349420	
	SM 5310 B-00	Organic Carbon	8.2		mg C/L	P349005	
2009074	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.044		mg P/L	P348787	
2009115	EPA 8321B	2,4-D	0.020		ug/L	P348626	
		Bentazon	0.023		ug/L	P348626	
		MCP	0.0049	I	ug/L	P348626	MS
		Triclopyr**	0.0040	U	ug/L	P348626	MS
		Imidacloprid	0.069		ug/L	P348626	
		Diuron	0.36		ug/L	P348626	
		Pyraclostrobin**	0.0020	U	ug/L	P348626	
		Primidone**	0.0040	U	ug/L	P348626	
		Linuron	0.0040	U	ug/L	P348626	
		Acetaminophen**	0.0080	U	ug/L	P348626	
		Fenuron	0.016	U	ug/L	P348626	
		Imazapyr**	0.36		ug/L	P348626	
		Carbamazepine**	4.0E-04	U	ug/L	P348626	
		Fluridone**	0.45		ug/L	P348626	
		Hydrocodone**	8.0E-04	U	ug/L	P348626	
		Naproxen**	0.0080	U	ug/L	P348626	
		Ibuprofen**	0.020	U	ug/L	P348626	
		Sucralose**	0.061		ug/L	P348754	
2009117	EPA 200.7 Rev. 4.4	Calcium	40.4		mg/L	P348964	
		Iron	1.19E+03		ug/L	P348964	
		Magnesium	6.18		mg/L	P348964	
		Potassium	1.7		mg/L	P348964	
		Sodium	11.4		mg/L	P348964	
		Zinc	5.0	U	ug/L	P348964	
	EPA 200.8 Rev. 5.4	Arsenic	2.87		ug/L	P348964	
		Cadmium	0.020	U	ug/L	P348964	
		Chromium	0.40	U	ug/L	P348964	
		Copper	1.75		ug/L	P348964	

Field ID: 20030891

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2009117	EPA 200.8 Rev. 5.4	Lead	0.18	I	ug/L	P348964	
		Nickel	0.65	I	ug/L	P348964	
		Silver	0.010	U	ug/L	P348964	

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: BIG FISHWEIR CR HERSCHEL ST

Collection Date/Time: 07/18/2018 10:10

Field ID: 20030139

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2009075	EPA 180.1 Rev. 2.0	Turbidity	5.3		NTU	P348827	
	SM 2320 B-97	Total Alkalinity	78		mg CaCO3/L	P349027	
	SM 2540 D-97	TSS	4	I	mg/L	P349172	
	SM 4500 F-C-97	Fluoride	0.10		mg F/L	P349031	
2009076	EPA 350.1 Rev. 2.0	Ammonia-N	0.087		mg N/L	P349157	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.87		mg N/L	P348953	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.25		mg N/L	P348973	
	EPA 365.1 Rev. 2.0	Total-P	0.22		mg P/L	P349420	
	SM 5310 B-00	Organic Carbon	9.3		mg C/L	P349005	
2009077	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.14		mg P/L	P348787	
2009116	EPA 8321B	2,4-D	0.40		ug/L	P348626	
		Bentazon	0.014		ug/L	P348626	
		MCP	0.11		ug/L	P348626	MS
		Triclopyr**	0.0040	U	ug/L	P348626	MS
		Imidacloprid	0.19		ug/L	P348626	
		Diuron	0.023		ug/L	P348626	
		Pyraclostrobin**	0.0020	U	ug/L	P348626	
		Primidone**	0.0040	U	ug/L	P348626	
		Linuron	0.0040	U	ug/L	P348626	
		Acetaminophen**	0.29	I	ug/L	P348626	
		Fenuron	0.016	U	ug/L	P348626	
		Imazapyr**	0.13		ug/L	P348626	
		Carbamazepine**	4.6E-04	I	ug/L	P348626	
		Fluridone**	4.0E-04	U	ug/L	P348626	
		Hydrocodone**	8.0E-04	U	ug/L	P348626	
		Naproxen**	0.041		ug/L	P348626	
		Ibuprofen**	0.091		ug/L	P348626	
		Sucralose**	0.27		ug/L	P348754	

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: BIG FISHWEIR CR SF @ HAMILTON ST

Collection Date/Time: 07/18/2018 09:50

Field ID: 20030801

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2009062	EPA 180.1 Rev. 2.0	Turbidity	3.9	A	NTU	P348827	
	EPA 300.0 Rev. 2.1	Chloride	12		mg Cl/L	P349150	
		Sulfate	21		mg SO4/L	P349155	
	SM 2120 B	Color (true)	62		PCU	P348781	
	SM 2320 B-97	Total Alkalinity	125		mg CaCO3/L	P349027	
	SM 2540 C-97	TDS	204		mg/L	P349195	
	SM 2540 D-97	TSS	3	I	mg/L	P349172	
	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P349031	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.10		mg N/L	P349157	
2009066	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.75		mg N/L	P348952	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.23		mg N/L	P348972	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P349420	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P349004	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.080		mg P/L	P348786	
2009113	EPA 8321B	2,4-D	0.22		ug/L	P348626	
		Bentazon	0.013		ug/L	P348626	
		MCP	0.022		ug/L	P348626	MS
		Triclopyr**	0.0040	U	ug/L	P348626	MS
		Imidacloprid	0.17		ug/L	P348626	
		Diuron	0.0029	I	ug/L	P348626	
		Pyraclostrobin**	0.0020	U	ug/L	P348626	
		Primidone**	0.0040	U	ug/L	P348626	
		Linuron	0.0040	U	ug/L	P348626	
		Acetaminophen**	0.064		ug/L	P348626	
		Fenuron	0.016	U	ug/L	P348626	
		Imazapyr**	0.10		ug/L	P348626	
		Carbamazepine**	4.9E-04	I	ug/L	P348626	
		Fluridone**	4.0E-04	U	ug/L	P348626	
		Hydrocodone**	8.0E-04	U	ug/L	P348626	
		Naproxen**	0.0080	U	ug/L	P348626	
		Ibuprofen**	0.020	U	ug/L	P348626	
		Sucralose**	0.17		ug/L	P348754	

Ref. Method and Comment:

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

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: LITTLE FISHWEIR @ PARK ST

Collection Date/Time: 07/18/2018 10:35

Field ID: 20030798

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2009063	EPA 180.1 Rev. 2.0	Turbidity	3.5		NTU	P348827	
	EPA 300.0 Rev. 2.1	Chloride	16		mg Cl/L	P349150	
		Sulfate	34		mg SO4/L	P349155	
	SM 2120 B	Color (true)	48		PCU	P348781	
	SM 2320 B-97	Total Alkalinity	113		mg CaCO3/L	P349027	
	SM 2540 C-97	TDS	208		mg/L	P349195	
	SM 2540 D-97	TSS	3	I	mg/L	P349172	
	SM 4500 F-C-97	Fluoride	0.20		mg F/L	P349031	
2009067	EPA 350.1 Rev. 2.0	Ammonia-N	0.076		mg N/L	P349157	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.54		mg N/L	P348952	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.11		mg N/L	P348973	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P349420	
	SM 5310 B-00	Organic Carbon	8.3		mg C/L	P349005	
2009071	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.085		mg P/L	P348787	
2009114	EPA 8321B	2,4-D	0.034		ug/L	P348626	
		Bentazon	0.0065		ug/L	P348626	
		MCP	0.0047	I	ug/L	P348626	MS
		Triclopyr**	0.0040	U	ug/L	P348626	MS
		Imidacloprid	0.059		ug/L	P348626	
		Diuron	0.0024	I	ug/L	P348626	
		Pyraclostrobin**	0.0020	U	ug/L	P348626	
		Primidone**	0.0040	U	ug/L	P348626	
		Linuron	0.0040	U	ug/L	P348626	
		Acetaminophen**	0.015	I	ug/L	P348626	
		Fenuron	0.016	U	ug/L	P348626	
		Imazapyr**	0.037		ug/L	P348626	
		Carbamazepine**	4.0E-04	U	ug/L	P348626	
		Fluridone**	4.0E-04	U	ug/L	P348626	
		Hydrocodone**	8.0E-04	U	ug/L	P348626	
		Naproxen**	0.0080	U	ug/L	P348626	
		Ibuprofen**	0.020	U	ug/L	P348626	
		Sucralose**	0.046		ug/L	P348754	

Ref. Method and Comment:

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P348826

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P348827

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P348964

Component	Result	Code	Units
Calcium	0.075	U	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: P348964

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
Lead	0.050	U	ug/L
Nickel	0.20	U	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P349150

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P349155

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P349157

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348952

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348953

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P348972

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P348973

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P349420

Component	Result	Code	Units
Total-P	0.005	U	mg P/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P349560

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P348786

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P348787

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

Reference Method: EPA 8321B
Batch ID: P348626

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P348626

Component	Result	Code	Units
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	4.0E-04	U	ug/L
Hydrocodone	8.0E-04	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P348754

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P348780

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P348781

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P349026

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

Reference Method: SM 2320 B-97
Batch ID: P349027

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

Reference Method: SM 2540 C-97
Batch ID: P349194

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-97
Batch ID: P349195

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P349171

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P349172

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P349030

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P349031

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P349004

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

Reference Method: SM 5310 B-00
Batch ID: P349005

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: P348964

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	101		P	85 - 115
Iron	104		P	85 - 115
Magnesium	108		P	85 - 115
Potassium	101		P	85 - 115
Sodium	99.0		P	85 - 115
Zinc	99.7		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P348964

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	100		P	85 - 115
Cadmium	98.4		P	85 - 115
Chromium	96.7		P	85 - 115
Copper	96.4		P	85 - 115
Lead	94.6		P	85 - 115
Nickel	98.2		P	85 - 115
Silver	100		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P349150

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	108		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P349155

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P349157

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348952

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: P348953

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P348972

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: P348973

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	103		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P349420

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P349560

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P348786

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P348787

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

Reference Method: EPA 8321B
Batch ID: P348626

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	117		P	40 - 150
Acetaminophen	86.6		P	30 - 150
Bentazon	98.1		P	30 - 150
Carbamazepine	80.4		P	40 - 150
Diuron	76.3		P	40 - 150
Fenuron	97.7		P	40 - 150
Fluridone	80.9		P	40 - 150
Hydrocodone	92.2		P	40 - 150
Ibuprofen	101		P	40 - 150
Imazapyr	90.3		P	40 - 150
Imidacloprid	91.8		P	40 - 160
Linuron	84.3		P	40 - 150
MCPP	139		P	40 - 150
Naproxen	116		P	40 - 150
Primidone	94.8		P	40 - 150
Pyraclostrobin	85.1		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P348626

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Triclopyr	136		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P348754

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	77.3		P	40 - 150

Reference Method: SM 2120 B
Batch ID: P348780

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.1		P	85 - 115

Reference Method: SM 2120 B
Batch ID: P348781

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

Reference Method: SM 2320 B-97
Batch ID: P349026

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	98 - 107

Reference Method: SM 2320 B-97
Batch ID: P349027

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	106		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P349030

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.5		P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P349031

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.1		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P349004

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.0		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
Batch ID: P349005

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P348964

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2009018	Calcium	102		P	80 - 120
2009018	Iron	102		P	80 - 120
2009018	Magnesium	103		P	80 - 120
2009018	Potassium	95.9		P	80 - 120
2009018	Sodium	96.3		P	80 - 120
2009018	Zinc	102		P	80 - 120
2009245	Calcium	103		P	80 - 120
2009245	Iron	101	101	P/P	80 - 120
2009245	Magnesium	104	105	P/P	80 - 120
2009245	Potassium	96.3	96.7	P/P	80 - 120
2009245	Sodium	98.0		P	80 - 120
2009245	Zinc	99.2	98.5	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P348964

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2009018	Arsenic	98.4		P	80 - 120
2009018	Cadmium	96.9		P	80 - 120
2009018	Chromium	96.7		P	80 - 120
2009018	Copper	93.2		P	80 - 120
2009018	Lead	94.6		P	80 - 120
2009018	Nickel	96.7		P	80 - 120
2009018	Silver	98.6		P	80 - 120
2009245	Arsenic	94.2	100	P/P	80 - 120
2009245	Cadmium	94.2	100	P/P	80 - 120
2009245	Chromium	92.7	98.9	P/P	80 - 120
2009245	Copper	88.5	94.6	P/P	80 - 120
2009245	Lead	90.9	96.4	P/P	80 - 120
2009245	Nickel	90.0	96.8	P/P	80 - 120
2009245	Silver	97.5	102	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P349150

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2008993	Chloride	105		P	90 - 110
2009081	Chloride	104		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P349155

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2008993	Sulfate	103		P	90 - 110
2009081	Sulfate	103		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P349157

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2009041	Ammonia-N	96.7	97.1	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348952

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2009067	Kjeldahl Nitrogen	106	106	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348953

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2009229	Kjeldahl Nitrogen	98.0	99.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P348972

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2008996	NO2NO3-N	102	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P348973

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2009073	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P349420

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2009065	Total-P	96.4	98.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P349560

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2011876	Total-P	95.5	95.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P348786

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2009000	O-Phosphate-P	97.4	98.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P348787

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2009071	O-Phosphate-P	95.7	95.3	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P348626

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2009013	2,4-D	139	139	P/P	40 - 150
2009013	Acetaminophen	106	109	P/P	30 - 150
2009013	Bentazon	52.6	54.5	P/P	30 - 150
2009013	Carbamazepine	75.6	81.3	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P348626

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2009013	Diuron	73.1	78.4	P/P	40 - 150
2009013	Fenuron	77.7	87.3	P/P	40 - 150
2009013	Fluridone	83.2	89.3	P/P	40 - 150
2009013	Hydrocodone	87.3	97.3	P/P	40 - 150
2009013	Ibuprofen	94.3	102	P/P	40 - 150
2009013	Imazapyr	91.8	106	P/P	40 - 150
2009013	Imidacloprid	142	153	P/P	40 - 160
2009013	Linuron	89.6	94.1	P/P	40 - 150
2009013	MCP	162	165	F/F	40 - 150
2009013	Naproxen	103	114	P/P	40 - 150
2009013	Primidone	109	121	P/P	40 - 150
2009013	Pyraclostrobin	86.7	101	P/P	40 - 150
2009013	Triclopyr	162	162	F/F	40 - 150

Reference Method: EPA 8321B
Batch ID: P348754

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2008562	Sucralose	75.6	96.9	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P349030

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2009546	Fluoride	96.3	96.3	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P349031

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2009225	Fluoride	98.4	96.3	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P349005

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2009067	Organic Carbon	92.7	94.1	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P348826

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2008914	Turbidity	2.02	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P348827

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2009062	Turbidity	2.04	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P348964

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2009245	Calcium	0.144	Spike	P	0 - 20
2009245	Iron	0.208	Spike	P	0 - 20
2009245	Magnesium	0.256	Spike	P	0 - 20
2009245	Potassium	0.293	Spike	P	0 - 20
2009245	Sodium	0.441	Spike	P	0 - 20
2009245	Zinc	0.734	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P348964

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2009245	Arsenic	5.99	Spike	P	0 - 20
2009245	Cadmium	6.27	Spike	P	0 - 20
2009245	Chromium	6.55	Spike	P	0 - 20
2009245	Copper	6.35	Spike	P	0 - 20
2009245	Lead	5.91	Spike	P	0 - 20
2009245	Nickel	7.10	Spike	P	0 - 20
2009245	Silver	4.62	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P349150

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2008993	Chloride	2.26	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P349155

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2008993	Sulfate	3.12	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P349157

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2009041	Ammonia-N	0.263	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348952

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2009067	Kjeldahl Nitrogen	0.0719	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348953

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2009229	Kjeldahl Nitrogen	0.764	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P348972

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2008996	NO2NO3-N	0.664	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P348973

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2009073	NO2NO3-N	0.257	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P349420

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2009065	Total-P	1.40	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P349560

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2011876	Total-P	0.220	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P348786

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2009000	O-Phosphate-P	1.12	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P348787

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2009071	O-Phosphate-P	0.222	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P348626

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2009013	2,4-D	0.511	Spike	P	0 - 30
2009013	Acetaminophen	2.89	Spike	P	0 - 30
2009013	Bentazon	3.14	Spike	P	0 - 30
2009013	Carbamazepine	7.06	Spike	P	0 - 30
2009013	Diuron	7.10	Spike	P	0 - 30
2009013	Fenuron	11.5	Spike	P	0 - 30
2009013	Fluridone	7.03	Spike	P	0 - 30
2009013	Hydrocodone	10.9	Spike	P	0 - 30
2009013	Ibuprofen	7.50	Spike	P	0 - 30
2009013	Imazapyr	12.9	Spike	P	0 - 30
2009013	Imidacloprid	4.97	Spike	P	0 - 30
2009013	Linuron	4.99	Spike	P	0 - 30
2009013	MCP	1.75	Spike	P	0 - 30
2009013	Naproxen	10.1	Spike	P	0 - 30
2009013	Primidone	9.41	Spike	P	0 - 30
2009013	Pyraclostrobin	15.7	Spike	P	0 - 30
2009013	Triclopyr	0.178	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P348754

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2008562	Sucralose	13.5	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P348780

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2008987	Color (true)	0.109	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P348781

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2009061	Color (true)	4.33	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P349026

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

Reference Method: SM 2320 B-97
Batch ID: P349026

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2009546	Total Alkalinity	0.296	Sample	P	0 - 1.6

Reference Method: SM 2320 B-97
Batch ID: P349027

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2009225	Total Alkalinity	0.239	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P349194

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2009027	TDS	4.65	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P349195

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2009161	TDS	7.29	Sample	P	0 - 10

Reference Method: SM 2540 D-97
Batch ID: P349171

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2009027	TSS	2.60	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P349030

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2009546	Fluoride	0.0	Spike	P	0 - 3.5

Reference Method: SM 4500 F-C-97
Batch ID: P349031

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2009225	Fluoride	1.92	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P349004

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2008649	Organic Carbon	1.54	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P349005

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2009067	Organic Carbon	1.04	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: 2009111
Field Sample ID: 20030760

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	128	P	30 - 160
EPA 8321B	Acetaminophen-d4	82.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	55.2	P	30 - 160
EPA 8321B	Diuron-d6	56.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	88.9	P	40 - 160
EPA 8321B	Primidone-d5	83.6	P	30 - 160
EPA 8321B	Sucralose-d6	106	P	40 - 160

Lab Sample ID: 2009112
Field Sample ID: 20030082

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	149	P	30 - 160
EPA 8321B	Acetaminophen-d4	89.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	54.7	P	30 - 160
EPA 8321B	Diuron-d6	53.7	P	30 - 160
EPA 8321B	Ibuprofen-d3	93.2	P	40 - 160
EPA 8321B	Primidone-d5	88.0	P	30 - 160
EPA 8321B	Sucralose-d6	119	P	40 - 160

Lab Sample ID: 2009113
Field Sample ID: 20030801

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	130	P	30 - 160
EPA 8321B	Acetaminophen-d4	78.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	44.0	P	30 - 160
EPA 8321B	Diuron-d6	41.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	84.5	P	40 - 160
EPA 8321B	Primidone-d5	77.0	P	30 - 160
EPA 8321B	Sucralose-d6	99.8	P	40 - 160

Lab Sample ID: 2009114
Field Sample ID: 20030798

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	146	P	30 - 160
EPA 8321B	Acetaminophen-d4	81.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	48.8	P	30 - 160
EPA 8321B	Diuron-d6	45.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	86.4	P	40 - 160
EPA 8321B	Primidone-d5	81.7	P	30 - 160
EPA 8321B	Sucralose-d6	111	P	40 - 160

Lab Sample ID: 2009115
Field Sample ID: 20030891

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	141	P	30 - 160
EPA 8321B	Acetaminophen-d4	93.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	58.7	P	30 - 160
EPA 8321B	Diuron-d6	53.5	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2009115
Field Sample ID: 20030891

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Ibuprofen-d3	105	P	40 - 160
EPA 8321B	Primidone-d5	94.2	P	30 - 160
EPA 8321B	Sucralose-d6	108	P	40 - 160

Lab Sample ID: 2009116
Field Sample ID: 20030139

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	149	P	30 - 160
EPA 8321B	Acetaminophen-d4	81.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	50.7	P	30 - 160
EPA 8321B	Diuron-d6	49.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	86.1	P	40 - 160
EPA 8321B	Primidone-d5	81.3	P	30 - 160
EPA 8321B	Sucralose-d6	118	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A85347

Included Lab Sample IDs: 2009060, 2009061, 2009062, 2009063, 2009072

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	103	104	P/P	90 - 115
Color (true)	104	104	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A85348

Included Lab Sample IDs: 2009068, 2009069, 2009070, 2009071, 2009074, 2009077

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.3	97.2	P/P	90 - 110
O-Phosphate-P	98.1	97.6	P/P	90 - 110
O-Phosphate-P	98.7	98.6	P/P	90 - 110
O-Phosphate-P	99.7	98.1	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A85363

Included Lab Sample IDs: 2009060, 2009061, 2009062, 2009063, 2009072, 2009075

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	99.5	P/P	95 - 105
Turbidity	99.5	98.5	P/P	95 - 105

Reference Method: EPA 8321B

Run ID: A85393

Included Lab Sample IDs: 2009111, 2009112, 2009113, 2009114, 2009115, 2009116

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	91.4	90.1	P/P	60 - 150
Sucralose	93.6	91.4	P/P	60 - 150

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A85414

Included Lab Sample IDs: 2009064, 2009065, 2009066, 2009067, 2009073, 2009076

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A85417

Included Lab Sample IDs: 2009060, 2009061, 2009062, 2009063, 2009072

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

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-00

Run ID: A85418

Included Lab Sample IDs: 2009064, 2009065, 2009066, 2009067, 2009073, 2009076

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.2	97.4	P/P	90 - 110
Organic Carbon	97.4	97.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A85424

Included Lab Sample IDs: 2009064, 2009065, 2009066, 2009067, 2009073, 2009076

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	106	P/P	90 - 110
Kjeldahl Nitrogen	102	102	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A85430

Included Lab Sample IDs: 2009060, 2009061, 2009062, 2009063, 2009072, 2009075

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	103	P/P	90 - 110
Total Alkalinity	104	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A85430

Included Lab Sample IDs: 2009060, 2009061, 2009062, 2009063, 2009072, 2009075

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	97.6	99.0	P/P	90 - 110
Fluoride	99.0	98.6	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A85442

Included Lab Sample IDs: 2009117

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	99.7	100	P/P	90 - 110
Iron	100	99.3	P/P	90 - 110
Magnesium	101	101	P/P	90 - 110
Potassium	97.3	97.0	P/P	90 - 110
Sodium	97.1	97.7	P/P	90 - 110
Zinc	97.9	99.9	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A85474

Included Lab Sample IDs: 2009064, 2009065, 2009066, 2009067, 2009073, 2009076

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	101	P/P	90 - 110
Ammonia-N	101	102	P/P	90 - 110
Ammonia-N	101	101	P/P	90 - 110
Ammonia-N	101	99.7	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A85598

Included Lab Sample IDs: 2009117

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	98.0	98.3	P/P	90 - 110
Cadmium	97.3	97.4	P/P	90 - 110
Chromium	97.5	98.4	P/P	90 - 110
Copper	95.5	97.2	P/P	90 - 110
Lead	95.7	96.3	P/P	90 - 110
Nickel	96.5	97.0	P/P	90 - 110
Silver	99.3	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A85600

Included Lab Sample IDs: 2009065, 2009066, 2009067, 2009073, 2009076

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

Reference Method: EPA 8321B

Run ID: A85613

Included Lab Sample IDs: 2009111, 2009112, 2009113, 2009114, 2009115, 2009116

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	117	127	P/P	50 - 150
Bentazon	118	120	P/P	50 - 150
Ibuprofen	150	82.9	P/P	50 - 150
MCPD	144	136	P/P	50 - 150
Naproxen	83.6	86.4	P/P	60 - 150
Triclopyr	150	138	P/P	50 - 160

Reference Method: EPA 8321B

Run ID: A85626

Included Lab Sample IDs: 2009111, 2009112, 2009113, 2009114, 2009115, 2009116

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	95.0	84.2	P/P	60 - 150
Acetaminophen	98.2	95.0	P/P	60 - 150
Carbamazepine	115	122	P/P	60 - 150
Diuron	107	120	P/P	60 - 150
Fenuron	98.7	95.5	P/P	60 - 150
Fluridone	105	106	P/P	60 - 160
Fluridone	106	104	P/P	60 - 160
Hydrocodone	94.3	90.3	P/P	60 - 150
Imazapyr	94.2	91.5	P/P	50 - 150
Imidacloprid	90.1	90.9	P/P	60 - 150
Linuron	99.7	115	P/P	60 - 150
Primidone	105	100	P/P	60 - 150
Pyraclostrobin	109	115	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A85629

Included Lab Sample IDs: 2009112, 2009115

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	91.5	128	P/P	50 - 150
MCP	98.3	99.6	P/P	50 - 150
Tricopyr	99.7	96.9	P/P	50 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A85666

Included Lab Sample IDs: 2009064

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.7	104	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 SMP	MS
			LCS				
EPA 180.1 Rev. 2.0	Turbidity					2.02	
	Turbidity					2.04	
EPA 200.7 Rev. 4.4	Calcium	101	102	103			0.144
	Iron	104	102	101	101		0.208
	Magnesium	108	103	104	105		0.256
	Potassium	101	95.9	96.3	96.7		0.293
	Sodium	99.0	96.3	98.0			0.441
	Zinc	99.7	102	99.2	98.5		0.734
EPA 200.8 Rev. 5.4	Arsenic	100	98.4	94.2	100		5.99
	Cadmium	98.4	96.9	94.2	100		6.27
	Chromium	96.7	96.7	92.7	98.9		6.55
	Copper	96.4	93.2	88.5	94.6		6.35
	Lead	94.6	94.6	90.9	96.4		5.91
	Nickel	98.2	96.7	90.0	96.8		7.10
	Silver	100	98.6	97.5	102		4.62
EPA 300.0 Rev. 2.1	Chloride	108	105	104		2.26	
	Sulfate	106	103	103		3.12	
EPA 350.1 Rev. 2.0	Ammonia-N	99.8	96.7	97.1			0.263
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	106	106			0.0719
	Kjeldahl Nitrogen	102	98.0	99.3			0.764
EPA 353.2 Rev. 2.0	NO2NO3-N	102	102	103			0.664
	NO2NO3-N	103	102	102			0.257
EPA 365.1 Rev. 2.0	Total-P	99.1	96.4	98.4			1.40
	Total-P	100	95.5	95.3			0.220
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.0	97.4	98.5			1.12
	O-Phosphate-P	98.7	95.7	95.3			0.222
EPA 8321B	2,4-D	117	139	139			0.511
	Acetaminophen	86.6	106	109			2.89
	Bentazon	98.1	52.6	54.5			3.14
	Carbamazepine	80.4	75.6	81.3			7.06
	Diuron	76.3	73.1	78.4			7.10
	Fenuron	97.7	77.7	87.3			11.5
	Fluridone	80.9	83.2	89.3			7.03
	Hydrocodone	92.2	87.3	97.3			10.9
	Ibuprofen	101	94.3	102			7.50
	Imazapyr	90.3	91.8	106			12.9
	Imidacloprid	91.8	142	153			4.97
	Linuron	84.3	89.6	94.1			4.99
	MCPP	139	162	165			1.75
	Naproxen	116	103	114			10.1
	Primidone	94.8	109	121			9.41
	Pyraclostrobin	85.1	86.7	101			15.7
	Sucralose	77.3	75.6	96.9			13.5
	Triclopyr	136	162	162			0.178
SM 2120 B	Color (true)	99.1				0.109	
	Color (true)	100				4.33	
SM 2320 B-97	Total Alkalinity	102				0.296	
	Total Alkalinity	106				0.239	
SM 2540 C-97	TDS					4.65	
	TDS					7.29	
SM 2540 D-97	TSS					2.60	
SM 4500 F-C-97	Fluoride	96.5	96.3	96.3			0.0
	Fluoride	96.1	98.4	96.3			1.92
SM 5310 B-00	Organic Carbon	94.0					1.54

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
SM 5310 B-00	Organic Carbon	94.8	92.7 94.1			1.04

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2009060, 2009061, 2009062, 2009063, 2009072, 2009075
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2009117
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2009117
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2009060, 2009061, 2009062, 2009063, 2009072
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2009060, 2009061, 2009062, 2009063, 2009072
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2009064, 2009065, 2009066, 2009067, 2009073, 2009076
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2009064, 2009065, 2009066, 2009067, 2009073, 2009076
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2009064, 2009065, 2009066, 2009067, 2009073, 2009076
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2009064, 2009065, 2009066, 2009067, 2009073, 2009076
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2009068, 2009069, 2009070, 2009071, 2009074, 2009077
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2009111, 2009112, 2009113, 2009114, 2009115, 2009116
SM 2120 B / E31780	True Color measured at 450 nm	2009060, 2009061, 2009062, 2009063, 2009072
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2009060, 2009061, 2009062, 2009063, 2009072, 2009075
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2009060, 2009061, 2009062, 2009063, 2009072
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2009060, 2009061, 2009062, 2009063, 2009072, 2009075
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2009060, 2009061, 2009062, 2009063, 2009072, 2009075
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2009064, 2009065, 2009066, 2009067, 2009073, 2009076

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	07/19/2018			07/19/2018 15:51	Blanca Fach	2009060, 2009061, 2009062, 2009063, 2009072, 2009075
EPA 200.7 Rev. 4.4	07/19/2018	07/23/2018 14:40	Elliott D. Healy	07/24/2018 15:30	Betina Topolski	2009117
EPA 200.8 Rev. 5.4	07/19/2018	07/23/2018 14:40	Elliott D. Healy	07/31/2018 17:16	Robert K Palmer	2009117
EPA 300.0 Rev. 2.1	07/19/2018			07/25/2018 12:32	Lipi Saha	2009060
	07/19/2018			07/25/2018 12:44	Lipi Saha	2009061
	07/19/2018			07/25/2018 12:56	Lipi Saha	2009062
	07/19/2018			07/25/2018 13:08	Lipi Saha	2009063
	07/19/2018			07/25/2018 13:44	Lipi Saha	2009072
EPA 350.1 Rev. 2.0	07/19/2018			07/25/2018 12:41	Ping Hua	2009066
	07/19/2018			07/25/2018 12:43	Ping Hua	2009067
	07/19/2018			07/25/2018 12:44	Ping Hua	2009073
	07/19/2018			07/25/2018 12:52	Ping Hua	2009076
	07/19/2018			07/25/2018 14:02	Ping Hua	2009064
	07/19/2018			07/25/2018 14:10	Ping Hua	2009065
EPA 351.2 Rev. 2.0	07/19/2018	07/23/2018 11:30	Adrian Shelby	07/24/2018 10:37	Joseph Suarez	2009064
	07/19/2018	07/23/2018 11:30	Adrian Shelby	07/24/2018 10:42	Joseph Suarez	2009065
	07/19/2018	07/23/2018 11:30	Adrian Shelby	07/24/2018 10:43	Joseph Suarez	2009066
	07/19/2018	07/23/2018 11:30	Adrian Shelby	07/24/2018 10:45	Joseph Suarez	2009067
	07/19/2018	07/23/2018 11:30	Adrian Shelby	07/24/2018 10:52	Joseph Suarez	2009073
	07/19/2018	07/23/2018 11:30	Adrian Shelby	07/24/2018 10:54	Joseph Suarez	2009076
EPA 353.2 Rev. 2.0	07/19/2018			07/23/2018 12:46	Lauren Bottorf	2009064
	07/19/2018			07/23/2018 12:47	Lauren Bottorf	2009065
	07/19/2018			07/23/2018 12:48	Lauren Bottorf	2009066
	07/19/2018			07/23/2018 12:55	Lauren Bottorf	2009073
	07/19/2018			07/23/2018 13:01	Lauren Bottorf	2009067
	07/19/2018			07/23/2018 13:02	Lauren Bottorf	2009076
EPA 365.1 Rev. 2.0	07/19/2018	07/31/2018 10:30	Sima Feizi	08/01/2018 09:00	Beverly Y. Sanders	2009065
	07/19/2018	07/31/2018 10:30	Sima Feizi	08/01/2018 09:03	Beverly Y. Sanders	2009066
	07/19/2018	07/31/2018 10:30	Sima Feizi	08/01/2018 09:04	Beverly Y. Sanders	2009067
	07/19/2018	07/31/2018 10:30	Sima Feizi	08/01/2018 09:06	Beverly Y. Sanders	2009073
	07/19/2018	07/31/2018 10:30	Sima Feizi	08/01/2018 09:09	Beverly Y. Sanders	2009076
	07/19/2018	08/02/2018 11:50	Sima Feizi	08/03/2018 08:52	Beverly Y. Sanders	2009064
EPA 365.1 Rev. 2.0 dissolved	07/19/2018			07/19/2018 15:10	Julia Storbeck	2009071
	07/19/2018			07/19/2018 15:34	Julia Storbeck	2009069
	07/19/2018			07/19/2018 15:35	Julia Storbeck	2009070
	07/19/2018			07/19/2018 15:36	Julia Storbeck	2009077
	07/19/2018			07/19/2018 15:47	Julia Storbeck	2009074
	07/19/2018			07/19/2018 16:14	Julia Storbeck	2009068
EPA 8321B	07/19/2018	07/20/2018 10:00	Hoor Shaik	07/25/2018 04:58	Juyoung Kim	2009111

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	07/19/2018	07/20/2018 10:00	Hoor Shaik	07/25/2018 05:32	Juyoung Kim	2009112
	07/19/2018	07/20/2018 10:00	Hoor Shaik	07/25/2018 06:07	Juyoung Kim	2009113
	07/19/2018	07/20/2018 10:00	Hoor Shaik	07/25/2018 06:41	Juyoung Kim	2009114
	07/19/2018	07/20/2018 10:00	Hoor Shaik	07/25/2018 07:16	Juyoung Kim	2009115
	07/19/2018	07/20/2018 10:00	Hoor Shaik	07/25/2018 07:51	Juyoung Kim	2009116
	07/19/2018	07/20/2018 10:00	Hoor Shaik	07/25/2018 12:27	Juyoung Kim	2009115
	07/19/2018	07/20/2018 10:00	Hoor Shaik	07/25/2018 13:02	Juyoung Kim	2009116
	07/19/2018	07/20/2018 10:00	Hoor Shaik	07/28/2018 11:05	Juyoung Kim	2009111
	07/19/2018	07/20/2018 10:00	Hoor Shaik	07/28/2018 11:39	Juyoung Kim	2009112
	07/19/2018	07/20/2018 10:00	Hoor Shaik	07/28/2018 12:14	Juyoung Kim	2009113
	07/19/2018	07/20/2018 10:00	Hoor Shaik	07/28/2018 12:49	Juyoung Kim	2009114
	07/19/2018	07/20/2018 10:00	Hoor Shaik	07/28/2018 13:23	Juyoung Kim	2009115
	07/19/2018	07/20/2018 10:00	Hoor Shaik	07/28/2018 13:58	Juyoung Kim	2009116
	07/19/2018	07/20/2018 10:00	Hoor Shaik	08/02/2018 05:43	Juyoung Kim	2009112
	07/19/2018	07/20/2018 10:00	Hoor Shaik	08/02/2018 06:17	Juyoung Kim	2009115
	07/19/2018	07/20/2018 16:30	Mohammad Ghaffari	07/21/2018 13:16	Mohammad Ghaffari	2009111
	07/19/2018	07/20/2018 16:30	Mohammad Ghaffari	07/21/2018 13:30	Mohammad Ghaffari	2009112
	07/19/2018	07/20/2018 16:30	Mohammad Ghaffari	07/21/2018 13:45	Mohammad Ghaffari	2009113
	07/19/2018	07/20/2018 16:30	Mohammad Ghaffari	07/21/2018 14:00	Mohammad Ghaffari	2009114
	07/19/2018	07/20/2018 16:30	Mohammad Ghaffari	07/21/2018 14:14	Mohammad Ghaffari	2009115
	07/19/2018	07/20/2018 16:30	Mohammad Ghaffari	07/21/2018 14:44	Mohammad Ghaffari	2009116
SM 2120 B	07/19/2018			07/19/2018 15:11	Tanya Welborn	2009060
	07/19/2018			07/19/2018 15:15	Tanya Welborn	2009061
	07/19/2018			07/19/2018 15:16	Tanya Welborn	2009062
	07/19/2018			07/19/2018 15:17	Tanya Welborn	2009063
	07/19/2018			07/19/2018 15:18	Tanya Welborn	2009072
SM 2320 B-97	07/19/2018			07/23/2018 22:09	Dale L. Simmons	2009060
	07/19/2018			07/23/2018 22:19	Dale L. Simmons	2009061
	07/19/2018			07/23/2018 23:52	Dale L. Simmons	2009062
	07/19/2018			07/24/2018 00:02	Dale L. Simmons	2009063
	07/19/2018			07/24/2018 00:12	Dale L. Simmons	2009072
	07/19/2018			07/24/2018 00:22	Dale L. Simmons	2009075
SM 2540 C-97	07/19/2018			07/20/2018 16:46	William L. Brown IV	2009060, 2009061, 2009062, 2009063, 2009072
SM 2540 D-97	07/19/2018			07/20/2018 17:00	William L. Brown IV	2009060, 2009061, 2009062, 2009063, 2009072, 2009075
SM 4500 F-C-97	07/19/2018			07/23/2018 22:09	Dale L. Simmons	2009060
	07/19/2018			07/23/2018 22:19	Dale L. Simmons	2009061
	07/19/2018			07/23/2018 23:52	Dale L. Simmons	2009062
	07/19/2018			07/24/2018 00:02	Dale L. Simmons	2009063

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 4500 F-C-97	07/19/2018			07/24/2018 00:12	Dale L. Simmons	2009072
	07/19/2018			07/24/2018 00:22	Dale L. Simmons	2009075
SM 5310 B-00	07/19/2018			07/23/2018 19:30	Megan Treadwell	2009064
	07/19/2018			07/23/2018 19:44	Megan Treadwell	2009065
	07/19/2018			07/23/2018 19:57	Megan Treadwell	2009066
	07/19/2018			07/23/2018 20:41	Megan Treadwell	2009067
	07/19/2018			07/23/2018 22:16	Megan Treadwell	2009073
	07/19/2018			07/23/2018 22:29	Megan Treadwell	2009076