

Chemical Analysis Report

SE-DIST-2018-09-20-01

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

Event Description: **SMP- Martin Boat**
Request ID: **RQ-2018-09-17-27**
Customer: **SE-DIST**
Project ID: **SMP**

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Date Certified: 25-OCT-2018 14:50



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: Manatee Pocket @ Port Salerno

Collection Date/Time: 09/19/2018 12:00

Field ID: G2SE0012

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2027000	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P352027	
	SM 2320 B-97	Total Alkalinity	128		mg CaCO3/L	P352230	
	SM 2540 D-97	TSS	3	UA	mg/L	P352255	
	SM 4500 F-C-97	Fluoride	0.78		mg F/L	P352231	
2027001	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P352278	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.55		mg N/L	P352485	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P352468	
	EPA 365.1 Rev. 2.0	Total-P	0.064		mg P/L	P352324	
	SM 5310 B-00	Organic Carbon	7.4		mg C/L	P352198	
2027002	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.028		mg P/L	P352014	
2027043	EPA 200.7 Rev. 4.4	Iron	90	U	ug/L	P352215	
		Zinc	15	U	ug/L	P352215	
	EPA 200.8 Rev. 5.4	Arsenic	2.71		ug/L	P325215	
		Cadmium	0.060	U	ug/L	P325215	
		Chromium	1.2	U	ug/L	P352215	
		Copper	8.7		ug/L	P352215	
		Lead	0.50	U	ug/L	P352215	
		Nickel	0.60	U	ug/L	P352215	
		Silver	0.030	U	ug/L	P352620	

Ref. Method and Comment:

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

EPA 200.8 Rev. 5.4: The copper result was confirmed on 10/20/2018.

Sample Location: Great Pocket @ Marker 8

Collection Date/Time: 09/19/2018 12:15

Field ID: G2SE0033

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2026997	EPA 180.1 Rev. 2.0	Turbidity	5.4		NTU	P352027	
	SM 2320 B-97	Total Alkalinity	126	A	mg CaCO3/L	P352230	
	SM 2540 D-97	TSS	7	I	mg/L	P352255	
	SM 4500 F-C-97	Fluoride	1.1		mg F/L	P352231	
2026998	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P352278	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.41		mg N/L	P352485	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P352078	
	EPA 365.1 Rev. 2.0	Total-P	0.049		mg P/L	P352324	
	SM 5310 B-00	Organic Carbon	4.1		mg C/L	P352198	
2026999	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.016		mg P/L	P352014	

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: South Fork SLR @ Leighton Park

Collection Date/Time: 09/19/2018 13:30

Field ID: G2SE0013

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2027003	EPA 180.1 Rev. 2.0	Turbidity	21	A	NTU	P352028	
	SM 2320 B-97	Total Alkalinity	124		mg CaCO3/L	P352178	
	SM 2540 D-97	TSS	28		mg/L	P352252	
	SM 4500 F-C-97	Fluoride	0.17		mg F/L	P352568	
2027005	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P352536	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P352183	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.042		mg N/L	P352294	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P352146	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P352263	
2027007	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.062		mg P/L	P352013	
2027041	EPA 8321B	2,4-D	0.26		ug/L	P351946	
		Bentazon	0.0034		ug/L	P351946	
		MCP	0.0020	U	ug/L	P351946	
		Triclopyr**	0.0040	U	ug/L	P351946	
		Imidacloprid	0.0026	I	ug/L	P351946	
		Diuron	0.0020	U	ug/L	P351946	
		Pyraclostrobin**	0.0020	U	ug/L	P351946	
		Primidone**	0.0040	U	ug/L	P351946	
		Linuron	0.0040	U	ug/L	P351946	
		Acetaminophen**	0.0080	U	ug/L	P351946	
		Fenuron	0.016	U	ug/L	P351946	
		Imazapyr**	0.018		ug/L	P351946	
		Carbamazepine**	8.0E-04	U	ug/L	P351946	
		Fluridone**	0.0071		ug/L	P351946	
		Hydrocodone**	8.0E-04	U	ug/L	P351946	
		Naproxen**	0.0080	U	ug/L	P351946	
		Ibuprofen**	0.020	U	ug/L	P351946	
		Sucralose**	0.17		ug/L	P351945	
		Acesulfame K**	0.10	U	ug/L	P351945	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: South Fork Saint Lucie @ Martin Hwy

Collection Date/Time: 09/19/2018 13:45

Field ID: G2SE0044

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2027004	EPA 180.1 Rev. 2.0	Turbidity	21		NTU	P352028	
	SM 2320 B-97	Total Alkalinity	123		mg CaCO3/L	P352179	
	SM 2540 D-97	TSS	28		mg/L	P352252	
	SM 4500 F-C-97	Fluoride	0.18		mg F/L	P352182	
2027006	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P352536	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P352183	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.058		mg N/L	P352294	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P352146	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P352263	
2027008	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.063		mg P/L	P352013	
2027042	EPA 8321B	2,4-D	0.22		ug/L	P351946	
		Bentazon	0.0040		ug/L	P351946	
		MCP	0.0020	U	ug/L	P351946	
		Triclopyr**	0.0040	U	ug/L	P351946	
		Imidacloprid	0.0025	I	ug/L	P351946	
		Diuron	0.0020	U	ug/L	P351946	
		Pyraclostrobin**	0.0020	U	ug/L	P351946	
		Primidone**	0.0040	U	ug/L	P351946	
		Linuron	0.0040	U	ug/L	P351946	
		Acetaminophen**	0.0080	U	ug/L	P351946	
		Fenuron	0.016	U	ug/L	P351946	
		Imazapyr**	0.025		ug/L	P351946	
		Carbamazepine**	8.0E-04	U	ug/L	P351946	
		Fluridone**	0.0066		ug/L	P351946	
		Hydrocodone**	8.0E-04	U	ug/L	P351946	
		Naproxen**	0.0080	U	ug/L	P351946	
		Ibuprofen**	0.020	U	ug/L	P351946	
		Sucralose**	0.13		ug/L	P351945	
		Acesulfame K**	0.10	U	ug/L	P351945	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: South Fork SLR @ St. Lucie Settlement

Collection Date/Time: 09/19/2018 14:10

Field ID: G2SE0040

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2027009	EPA 180.1 Rev. 2.0	Turbidity	10		NTU	P352028	
	SM 2320 B-97	Total Alkalinity	133		mg CaCO3/L	P352179	
	SM 2540 D-97	TSS	10	I	mg/L	P352252	
	SM 4500 F-C-97	Fluoride	0.17		mg F/L	P352182	
2027011	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P352536	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P352183	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.027		mg N/L	P352294	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P352146	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P352263	
2027013	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.061		mg P/L	P352013	
2027044	EPA 200.7 Rev. 4.4	Iron	650		ug/L	P352015	
		Zinc	5.0	U	ug/L	P352015	
	EPA 200.8 Rev. 5.4	Arsenic	2.06		ug/L	P352015	
		Cadmium	0.020	U	ug/L	P352015	
		Chromium	0.63	I	ug/L	P352015	
		Copper	2.11		ug/L	P352015	
		Lead	0.31		ug/L	P352015	
		Nickel	0.46	I	ug/L	P352015	
		Silver	0.010	U	ug/L	P352662	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: South Fork SLR @ SW Fuge

Collection Date/Time: 09/19/2018 14:30

Field ID: G2SE0041

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2027010	EPA 180.1 Rev. 2.0	Turbidity	9.1		NTU	P352028	
	SM 2320 B-97	Total Alkalinity	143	A	mg CaCO3/L	P352179	
	SM 2540 D-97	TSS	7	I	mg/L	P352252	
	SM 4500 F-C-97	Fluoride	0.16		mg F/L	P352182	
2027012	EPA 350.1 Rev. 2.0	Ammonia-N	0.014		mg N/L	P352536	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P352218	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.061		mg N/L	P352294	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P352147	
	SM 5310 B-00	Organic Carbon	17		mg C/L	P352263	
2027014	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.066		mg P/L	P352013	
2027045	EPA 200.7 Rev. 4.4	Iron	840		ug/L	P352015	
		Zinc	5.0	U	ug/L	P352015	
	EPA 200.8 Rev. 5.4	Arsenic	1.97		ug/L	P352015	
		Cadmium	0.020	U	ug/L	P352015	
		Chromium	0.70	I	ug/L	P352015	
		Copper	2.38		ug/L	P352015	
		Lead	0.32		ug/L	P352015	
		Nickel	0.47	I	ug/L	P352015	
		Silver	0.010	U	ug/L	P352662	

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: P352027

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P352028

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P352015

Component	Result	Code	Units
Iron	30	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P352215

Component	Result	Code	Units
Iron	30	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P325215

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352015

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352215

Component	Result	Code	Units
Chromium	0.40	U	ug/L
Copper	0.20	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.20	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352620

Component	Result	Code	Units
Silver	0.010	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352662

Component	Result	Code	Units
Silver	0.010	U	ug/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352278

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352536

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352183

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352218

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352485

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352078

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352294

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352468

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P352146

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P352147

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P352324

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352013

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352014

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

Reference Method: EPA 8321B
Batch ID: P351945

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

Reference Method: EPA 8321B
Batch ID: P351946

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P351946

Component	Result	Code	Units
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 2320 B-97
Batch ID: P352178

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

Reference Method: SM 2320 B-97
Batch ID: P352179

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

Reference Method: SM 2320 B-97
Batch ID: P352230

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

Reference Method: SM 2540 D-97
Batch ID: P352252

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P352255

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P352182

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P352231

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P352568

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P352198

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

Reference Method: SM 5310 B-00
Batch ID: P352263

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: P352015

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	112		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P352215

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	102		P	85 - 115
Zinc	93.9		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P325215

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	90.8		P	85 - 115
Cadmium	87.8		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352015

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	101		P	85 - 115
Cadmium	100		P	85 - 115
Chromium	96.7		P	85 - 115
Copper	99.2		P	85 - 115
Lead	95.8		P	85 - 115
Nickel	100		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352215

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chromium	112		P	85 - 115
Copper	110		P	85 - 115
Lead	104		P	85 - 115
Nickel	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352620

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Silver	99.9		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352662

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Silver	98.2		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352278

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352536

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352183

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352218

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352485

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352078

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: P352294

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352468

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P352146

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P352147

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P352324

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352013

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.8		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352014

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

Reference Method: EPA 8321B
Batch ID: P351945

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	100		P	40 - 150
Sucralose	110		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P351946

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	92.7		P	40 - 150
Acetaminophen	103		P	30 - 150
Bentazon	98.6		P	30 - 150
Carbamazepine	80.1		P	40 - 150
Diuron	71.0		P	40 - 150
Fenuron	105		P	40 - 150
Fluridone	104		P	40 - 150
Hydrocodone	113		P	40 - 150
Ibuprofen	92.5		P	40 - 150
Imazapyr	78.9		P	40 - 150
Imidacloprid	98.4		P	40 - 160
Linuron	65.0		P	40 - 150
MCPP	101		P	40 - 150
Naproxen	80.9		P	40 - 150
Primidone	98.3		P	40 - 150
Pyraclostrobin	75.9		P	40 - 150
Triclopyr	98.1		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P352178

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

Reference Method: SM 2320 B-97
Batch ID: P352179

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

Reference Method: SM 2320 B-97
Batch ID: P352230

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

Reference Method: SM 4500 F-C-97
Batch ID: P352182

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

Reference Method: SM 4500 F-C-97
Batch ID: P352231

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

Reference Method: SM 4500 F-C-97
Batch ID: P352568

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.3		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P352198

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.5		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P352263

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P352015

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026324	Iron	107		P	80 - 120
2026324	Zinc	102		P	80 - 120
2026566	Iron	107	104	P/P	80 - 120
2026566	Zinc	99.1	97.9	P/P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P352215

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2027454	Iron	100	95.8	P/P	80 - 120
2027454	Zinc	97.4	94.6	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P325215

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2027454	Arsenic	116	115	P/P	70 - 130
2027454	Cadmium	98.4	96.6	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352015

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026324	Arsenic	106		P	80 - 120
2026324	Cadmium	102		P	80 - 120
2026324	Chromium	96.2		P	80 - 120
2026324	Copper	99.7		P	80 - 120
2026324	Lead	99.6		P	80 - 120
2026324	Nickel	99.0		P	80 - 120
2026566	Arsenic	100	99.7	P/P	80 - 120
2026566	Cadmium	99.7	97.5	P/P	80 - 120
2026566	Chromium	96.3	96.5	P/P	80 - 120
2026566	Copper	98.0	97.7	P/P	80 - 120
2026566	Lead	96.5	96.0	P/P	80 - 120
2026566	Nickel	97.5	97.4	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352215

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2027454	Chromium	104	104	P/P	80 - 120
2027454	Copper	104	103	P/P	80 - 120
2027454	Lead	105	105	P/P	80 - 120
2027454	Nickel	96.3	96.6	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352620

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2028700	Silver	93.5	99.7	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352662

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026444	Silver	98.0	98.1	P/P	80 - 120
2026834	Silver	97.7		P	80 - 120

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352278

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026420	Ammonia-N	109	106	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352536

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026965	Ammonia-N	95.4	95.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352218

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2027084	Kjeldahl Nitrogen	102	106	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352485

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2027001	Kjeldahl Nitrogen	107	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352078

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026871	NO2NO3-N	103	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352294

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026966	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352468

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2027001	NO2NO3-N	102	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P352146

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026965	Total-P	98.6	104	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P352147

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2027061	Total-P	100	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P352324

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026998	Total-P	92.2	91.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352013

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2027007	O-Phosphate-P	98.0	98.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352014

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026999	O-Phosphate-P	97.4	98.4	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P351945

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2027105	Acesulfame K	76.5	75.9	P/P	40 - 150
2027105	Sucralose	119	115	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P351946

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2027603	2,4-D	116	88.0	P/P	40 - 150
2027603	Acetaminophen	95.6	116	P/P	30 - 150
2027603	Bentazon	39.3	30.7	P/P	30 - 150
2027603	Carbamazepine	61.9	61.1	P/P	40 - 150
2027603	Diuron	49.5	51.7	P/P	40 - 150
2027603	Fenuron	81.6	94.9	P/P	40 - 150
2027603	Fluridone	94.0	104	P/P	40 - 150
2027603	Hydrocodone	107	126	P/P	40 - 150
2027603	Ibuprofen	77.9	64.4	P/P	40 - 150
2027603	Imazapyr	100	117	P/P	40 - 150
2027603	Imidacloprid	158	154	P/P	40 - 160
2027603	Linuron	50.4	56.0	P/P	40 - 150
2027603	MCPP	121	102	P/P	40 - 150
2027603	Naproxen	75.7	70.4	P/P	40 - 150
2027603	Primidone	91.3	104	P/P	40 - 150
2027603	Pyraclostrobin	79.0	92.1	P/P	40 - 150
2027603	Triclopyr	115	98.7	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P352182

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2027010	Fluoride	100	99.4	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P352231

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026446	Fluoride	94.4	95.2	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P352568

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026829	Fluoride	104	104	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P352198

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026448	Organic Carbon	94.8	97.2	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P352263

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026927	Organic Carbon	96.6	96.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P352027

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026980	Turbidity	0.837	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P352028

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2027003	Turbidity	0.473	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P352015

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026566	Iron	2.36	Spike	P	0 - 20
2026566	Zinc	1.24	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P352215

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2027454	Iron	4.40	Spike	P	0 - 20
2027454	Zinc	3.00	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P325215

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2027454	Arsenic	1.05	Spike	P	0 - 20
2027454	Cadmium	1.84	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352015

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026566	Arsenic	0.449	Spike	P	0 - 20
2026566	Cadmium	2.24	Spike	P	0 - 20
2026566	Chromium	0.197	Spike	P	0 - 20
2026566	Copper	0.296	Spike	P	0 - 20
2026566	Lead	0.522	Spike	P	0 - 20
2026566	Nickel	0.0183	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352215

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2027454	Chromium	0.0567	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352215

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2027454	Copper	1.04	Spike	P	0 - 20
2027454	Lead	0.0601	Spike	P	0 - 20
2027454	Nickel	0.303	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352620

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028700	Silver	6.36	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352662

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026444	Silver	0.148	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352278

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026420	Ammonia-N	2.78	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352536

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026965	Ammonia-N	0.0740	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352183

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026981	Kjeldahl Nitrogen	1.28	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352218

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2027084	Kjeldahl Nitrogen	2.13	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352485

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352485

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2027001	Kjeldahl Nitrogen	2.72	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352078

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026871	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352294

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026966	NO2NO3-N	0.499	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352468

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2027001	NO2NO3-N	1.46	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P352146

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026965	Total-P	5.19	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P352147

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2027061	Total-P	0.0980	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P352324

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026998	Total-P	0.950	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352013

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2027007	O-Phosphate-P	0.374	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352014

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026999	O-Phosphate-P	0.877	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P351945

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2027105	Acesulfame K	0.729	Spike	P	0 - 30
2027105	Sucralose	3.47	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P351946

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2027603	2,4-D	27.2	Spike	P	0 - 30
2027603	Acetaminophen	19.3	Spike	P	0 - 30
2027603	Bentazon	24.4	Spike	P	0 - 30
2027603	Carbamazepine	1.39	Spike	P	0 - 30
2027603	Diuron	4.30	Spike	P	0 - 30
2027603	Fenuron	15.1	Spike	P	0 - 30
2027603	Fluridone	9.90	Spike	P	0 - 30
2027603	Hydrocodone	16.4	Spike	P	0 - 30
2027603	Ibuprofen	18.9	Spike	P	0 - 30
2027603	Imazapyr	12.9	Spike	P	0 - 30
2027603	Imidacloprid	2.70	Spike	P	0 - 30
2027603	Linuron	10.7	Spike	P	0 - 30
2027603	MCP	17.1	Spike	P	0 - 30
2027603	Naproxen	7.16	Spike	P	0 - 30
2027603	Primidone	13.0	Spike	P	0 - 30
2027603	Pyraclostrobin	15.3	Spike	P	0 - 30
2027603	Triclopyr	14.8	Spike	P	0 - 30

Reference Method: SM 2320 B-97
Batch ID: P352178

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026829	Total Alkalinity	0.246	Sample	P	0 - 1.6

Reference Method: SM 2320 B-97
Batch ID: P352179

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2027010	Total Alkalinity	0.663	Sample	P	0 - 1.6

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
 Batch ID: P352230

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026997	Total Alkalinity	0.810	Sample	P	0 - 1.6

Reference Method: SM 4500 F-C-97
 Batch ID: P352182

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2027010	Fluoride	0.476	Spike	P	0 - 3.5

Reference Method: SM 4500 F-C-97
 Batch ID: P352231

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026446	Fluoride	0.467	Spike	P	0 - 3.5

Reference Method: SM 4500 F-C-97
 Batch ID: P352568

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026829	Fluoride	0.482	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
 Batch ID: P352198

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026448	Organic Carbon	1.84	Spike	P	0 - 20

Reference Method: SM 5310 B-00
 Batch ID: P352263

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026927	Organic Carbon	0.492	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: 2027041
Field Sample ID: G2SE0013

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	76.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	108	P	30 - 160
EPA 8321B	Carbamazepine-d10	67.1	P	30 - 160
EPA 8321B	Diuron-d6	51.5	P	30 - 160
EPA 8321B	Endothall-d6	130	P	40 - 160
EPA 8321B	Ibuprofen-d3	62.4	P	30 - 160
EPA 8321B	Primidone-d5	83.2	P	30 - 160
EPA 8321B	Sucralose-d6	125	P	40 - 160

Lab Sample ID: 2027042
Field Sample ID: G2SE0044

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	77.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	78.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	60.1	P	30 - 160
EPA 8321B	Diuron-d6	47.4	P	30 - 160
EPA 8321B	Endothall-d6	141	P	40 - 160
EPA 8321B	Ibuprofen-d3	70.1	P	30 - 160
EPA 8321B	Primidone-d5	63.8	P	30 - 160
EPA 8321B	Sucralose-d6	129	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A86618

Included Lab Sample IDs: 2026999, 2027002, 2027007, 2027008, 2027013, 2027014

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.7	99.0	P/P	90 - 110
O-Phosphate-P	99.0	99.3	P/P	90 - 110
O-Phosphate-P	99.3	97.9	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A86622

Included Lab Sample IDs: 2026997, 2027000, 2027003, 2027004, 2027009, 2027010

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: A86639

Included Lab Sample IDs: 2026998

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

Reference Method: EPA 8321B

Run ID: A86652

Included Lab Sample IDs: 2027041, 2027042

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	103	98.4	P/P	60 - 160

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A86655

Included Lab Sample IDs: 2027044, 2027045

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	102	102	P/P	90 - 110
Zinc	98.5	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A86657

Included Lab Sample IDs: 2027041, 2027042

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	113	115	P/P	60 - 160

Reference Method: SM 2320 B-97

Run ID: A86689

Included Lab Sample IDs: 2027003, 2027004, 2027009, 2027010

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	99.6	P/P	90 - 110
Total Alkalinity	99.6	103	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A86689

Included Lab Sample IDs: 2027004, 2027009, 2027010

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

Reference Method: SM 5310 B-00

Run ID: A86702

Included Lab Sample IDs: 2026998, 2027001

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.6	96.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A86704

Included Lab Sample IDs: 2027005, 2027006, 2027011, 2027012

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

Reference Method: SM 2320 B-97

Run ID: A86715

Included Lab Sample IDs: 2026997, 2027000

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	100	P/P	90 - 110
Total Alkalinity	99.8	103	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A86715

Included Lab Sample IDs: 2026997, 2027000

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.1	98.5	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A86723

Included Lab Sample IDs: 2027005, 2027006, 2027011, 2027012

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.2	93.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A86725

Included Lab Sample IDs: 2026998, 2027001

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	105	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A86728

Included Lab Sample IDs: 2027005, 2027006, 2027011, 2027012

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A86728

Included Lab Sample IDs: 2027005, 2027006, 2027011, 2027012

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A86734

Included Lab Sample IDs: 2027005, 2027006, 2027011

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	97.6	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A86735

Included Lab Sample IDs: 2027043

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	98.6	95.5	P/P	90 - 110
Zinc	97.4	93.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A86737

Included Lab Sample IDs: 2027012

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A86761

Included Lab Sample IDs: 2026998, 2027001

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A86784

Included Lab Sample IDs: 2027001

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.0	98.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A86804

Included Lab Sample IDs: 2027044, 2027045

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	96.6	98.1	P/P	90 - 110
Cadmium	95.4	96.8	P/P	90 - 110
Copper	95.6	96.9	P/P	90 - 110
Lead	95.2	96.9	P/P	90 - 110
Nickel	95.4	97.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A86818

Included Lab Sample IDs: 2027041, 2027042

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	83.8	82.2	P/P	50 - 150
Acetaminophen	104	92.8	P/P	60 - 160
Bentazon	95.9	89.3	P/P	50 - 160
Carbamazepine	100	105	P/P	60 - 160
Diuron	97.0	97.9	P/P	60 - 150
Fenuron	110	113	P/P	60 - 150
Fluridone	120	124	P/P	60 - 160
Hydrocodone	103	91.0	P/P	60 - 150
Ibuprofen	108	81.4	P/P	50 - 160
Imazapyr	90.9	103	P/P	50 - 150
Imidacloprid	95.5	94.5	P/P	60 - 150
Linuron	98.5	97.5	P/P	60 - 150
MCPP	85.4	96.9	P/P	50 - 150
Naproxen	93.3	109	P/P	50 - 160
Primidone	96.4	90.4	P/P	60 - 150
Pyraclostrobin	114	123	P/P	60 - 150
Triclopyr	93.7	97.5	P/P	50 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A86819

Included Lab Sample IDs: 2026998, 2027001

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A86823

Included Lab Sample IDs: 2027005, 2027006, 2027011, 2027012

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A86828

Included Lab Sample IDs: 2027044, 2027045

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	94.9	95.2	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A86829

Included Lab Sample IDs: 2027003

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.5	98.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A86832

Included Lab Sample IDs: 2027043

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	103	100	P/P	90 - 110
Cadmium	97.2	95.7	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A86934

Included Lab Sample IDs: 2027044, 2027045

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Silver	92.0	94.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A87140

Included Lab Sample IDs: 2027043

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Lead	98.2	97.5	P/P	90 - 110
Nickel	94.8	95.1	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A87191

Included Lab Sample IDs: 2027043

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	105	105	P/P	90 - 110
Copper	106	106	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A87239

Included Lab Sample IDs: 2027043

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Silver	98.0	99.1	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					0.837	
	Turbidity					0.473	
EPA 200.7 Rev. 4.4	Iron	112	107	107	104		2.36
	Iron	102	100	95.8			4.40
	Zinc	102	102	99.1	97.9		1.24
	Zinc	93.9	97.4	94.6			3.00
EPA 200.8 Rev. 5.4	Arsenic	90.8	116	115			1.05
	Arsenic	101	106	100	99.7		0.449
	Cadmium	87.8	98.4	96.6			1.84
	Cadmium	100	102	99.7	97.5		2.24
	Chromium	96.7	96.2	96.3	96.5		0.197
	Chromium	112	104	104			0.0567
	Copper	99.2	99.7	98.0	97.7		0.296
	Copper	110	104	103			1.04
	Lead	95.8	99.6	96.5	96.0		0.522
	Lead	104	105	105			0.0601
	Nickel	100	99.0	97.5	97.4		0.0183
	Nickel	103	96.3	96.6			0.303
	Silver	99.9	93.5	99.7			6.36
	Silver	98.2	98.0	98.1	97.7		0.148
EPA 350.1 Rev. 2.0	Ammonia-N	107	109	106			2.78
	Ammonia-N	97.7	95.4	95.5			0.0740
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	108					1.28
	Kjeldahl Nitrogen	108	102	106			2.13
	Kjeldahl Nitrogen	106	107	104			2.72
EPA 353.2 Rev. 2.0	NO2NO3-N	102	103	103			0.0
	NO2NO3-N	99.5	100	100			0.499
	NO2NO3-N	98.5	102	104			1.46
EPA 365.1 Rev. 2.0	Total-P	103	98.6	104			5.19
	Total-P	104	100	100			0.0980
	Total-P	98.9	92.2	91.3			0.950
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.8	98.0	98.6			0.374
	O-Phosphate-P	100	97.4	98.4			0.877
EPA 8321B	2,4-D	92.7	116	88.0			27.2
	Acesulfame K	100	76.5	75.9			0.729
	Acetaminophen	103	95.6	116			19.3
	Bentazon	98.6	39.3	30.7			24.4
	Carbamazepine	80.1	61.9	61.1			1.39
	Diuron	71.0	49.5	51.7			4.30
	Fenuron	105	81.6	94.9			15.1
	Fluridone	104	94.0	104			9.90
	Hydrocodone	113	107	126			16.4
	Ibuprofen	92.5	77.9	64.4			18.9
	Imazapyr	78.9	100	117			12.9
	Imidacloprid	98.4	158	154			2.70
	Linuron	65.0	50.4	56.0			10.7
	MCPP	101	121	102			17.1
	Naproxen	80.9	75.7	70.4			7.16
	Primidone	98.3	91.3	104			13.0
	Pyraclostrobin	75.9	79.0	92.1			15.3
	Sucralose	110	119	115			3.47
	Triclopyr	98.1	115	98.7			14.8
SM 2320 B-97	Total Alkalinity	102				0.246	
	Total Alkalinity	107				0.663	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
					LCS	
SM 2320 B-97	Total Alkalinity	102			0.810	
SM 4500 F-C-97	Fluoride	100	100	99.4		0.476
	Fluoride	96.1	94.4	95.2		0.467
	Fluoride	99.3	104	104		0.482
	Organic Carbon	97.5	94.8	97.2		1.84
SM 5310 B-00	Organic Carbon	95.8	96.6	96.0		0.492

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2026997, 2027000, 2027003, 2027004, 2027009, 2027010
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2027043, 2027044, 2027045
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2027043, 2027044, 2027045
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2026998, 2027001, 2027005, 2027006, 2027011, 2027012
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2026998, 2027001, 2027005, 2027006, 2027011, 2027012
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2026998, 2027001, 2027005, 2027006, 2027011, 2027012
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2026998, 2027001, 2027005, 2027006, 2027011, 2027012
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2026999, 2027002, 2027007, 2027008, 2027013, 2027014
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2027041, 2027042
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2026997, 2027000, 2027003, 2027004, 2027009, 2027010
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2026997, 2027000, 2027003, 2027004, 2027009, 2027010
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2026997, 2027000, 2027003, 2027004, 2027009, 2027010
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2026998, 2027001, 2027005, 2027006, 2027011, 2027012

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	09/20/2018			09/20/2018 16:37	Megan Treadwell	2026997, 2027000, 2027003, 2027004, 2027009, 2027010
EPA 200.7 Rev. 4.4	09/20/2018	09/20/2018 17:45	Elliott D. Healy	09/21/2018 20:39	Betina Topolski	2027044
	09/20/2018	09/20/2018 17:45	Elliott D. Healy	09/21/2018 20:46	Betina Topolski	2027045
	09/20/2018	09/25/2018 16:00	Elliott D. Healy	09/26/2018 17:27	Betina Topolski	2027043
EPA 200.8 Rev. 5.4	09/20/2018	09/20/2018 17:45	Elliott D. Healy	10/01/2018 05:32	Robert K Palmer	2027044
	09/20/2018	09/20/2018 17:45	Elliott D. Healy	10/01/2018 05:41	Robert K Palmer	2027045
	09/20/2018	09/20/2018 17:45	Elliott D. Healy	10/01/2018 18:25	Robert K Palmer	2027044
	09/20/2018	09/20/2018 17:45	Elliott D. Healy	10/01/2018 18:32	Robert K Palmer	2027045
	09/20/2018	09/25/2018 16:00	Elliott D. Healy	10/02/2018 06:57	Robert K Palmer	2027043
	09/20/2018	09/25/2018 16:00	Elliott D. Healy	10/19/2018 07:09	Allison Taylor	2027043
	09/20/2018	09/25/2018 16:00	Elliott D. Healy	10/19/2018 08:26	Allison Taylor	2027043
	09/20/2018	09/25/2018 16:00	Elliott D. Healy	10/20/2018 02:50	Allison Taylor	2027043
	09/20/2018	10/02/2018 18:00	Elliott D. Healy	10/22/2018 19:01	Allison Taylor	2027043
	09/20/2018	10/03/2018 12:17	Devin Thornton	10/05/2018 00:03	Robert K Palmer	2027044
	09/20/2018	10/03/2018 12:17	Devin Thornton	10/05/2018 00:09	Robert K Palmer	2027045
EPA 350.1 Rev. 2.0	09/20/2018			09/24/2018 14:22	Ping Hua	2026998
	09/20/2018			09/24/2018 14:24	Ping Hua	2027001
	09/20/2018			09/27/2018 12:17	Ping Hua	2027006
	09/20/2018			09/27/2018 12:18	Ping Hua	2027011
	09/20/2018			09/27/2018 12:20	Ping Hua	2027012
	09/20/2018			09/27/2018 14:07	Ping Hua	2027005
EPA 351.2 Rev. 2.0	09/20/2018	09/25/2018 15:30	Adrian Shelby	09/26/2018 12:57	Joseph Suarez	2027005
	09/20/2018	09/25/2018 15:30	Adrian Shelby	09/26/2018 12:58	Joseph Suarez	2027006
	09/20/2018	09/25/2018 15:30	Adrian Shelby	09/26/2018 13:00	Joseph Suarez	2027011
	09/20/2018	09/25/2018 15:30	Adrian Shelby	09/27/2018 08:38	Joseph Suarez	2027012
	09/20/2018	09/28/2018 12:45	Adrian Shelby	10/01/2018 12:33	Joseph Suarez	2026998
	09/20/2018	09/28/2018 12:45	Adrian Shelby	10/01/2018 12:34	Joseph Suarez	2027001
EPA 353.2 Rev. 2.0	09/20/2018			09/21/2018 13:35	Lauren Bottorf	2026998
	09/20/2018			09/26/2018 11:28	Lauren Bottorf	2027005
	09/20/2018			09/26/2018 11:29	Lauren Bottorf	2027006
	09/20/2018			09/26/2018 11:30	Lauren Bottorf	2027011
	09/20/2018			09/26/2018 11:31	Lauren Bottorf	2027012
	09/20/2018			09/28/2018 11:06	Lauren Bottorf	2027001
EPA 365.1 Rev. 2.0	09/20/2018	09/24/2018 12:05	Sima Feizi	09/25/2018 09:43	Beverly Y. Sanders	2027005
	09/20/2018	09/24/2018 12:05	Sima Feizi	09/25/2018 09:44	Beverly Y. Sanders	2027006
	09/20/2018	09/24/2018 12:05	Sima Feizi	09/25/2018 09:45	Beverly Y. Sanders	2027011
	09/20/2018	09/24/2018 12:05	Sima Feizi	09/25/2018 09:54	Beverly Y. Sanders	2027012
	09/20/2018	09/26/2018 11:30	Adrian Shelby	09/27/2018 14:23	Beverly Y. Sanders	2026998
	09/20/2018	09/26/2018 11:30	Adrian Shelby	09/27/2018 14:31	Beverly Y. Sanders	2027001

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 365.1 Rev. 2.0 dissolved	09/20/2018			09/20/2018 16:05	Julia Storbeck	2027007
	09/20/2018			09/20/2018 16:09	Julia Storbeck	2026999
	09/20/2018			09/20/2018 16:17	Julia Storbeck	2027014
	09/20/2018			09/20/2018 16:23	Julia Storbeck	2027002
	09/20/2018			09/20/2018 16:30	Julia Storbeck	2027008
	09/20/2018			09/20/2018 16:31	Julia Storbeck	2027013
EPA 8321B	09/20/2018	09/21/2018 15:00	Mohammad Ghaffari	09/22/2018 08:12	Mohammad Ghaffari	2027041
	09/20/2018	09/21/2018 15:00	Mohammad Ghaffari	09/22/2018 08:27	Mohammad Ghaffari	2027042
	09/20/2018	09/21/2018 15:00	Mohammad Ghaffari	09/23/2018 19:00	Mohammad Ghaffari	2027041
	09/20/2018	09/21/2018 15:00	Mohammad Ghaffari	09/23/2018 19:14	Mohammad Ghaffari	2027042
	09/20/2018	09/26/2018 09:00	Hoor Shaik	09/29/2018 05:01	Juyoung Kim	2027041
	09/20/2018	09/26/2018 09:00	Hoor Shaik	09/29/2018 05:36	Juyoung Kim	2027042
	09/20/2018	09/26/2018 09:00	Hoor Shaik	10/01/2018 11:16	Juyoung Kim	2027041
SM 2320 B-97	09/20/2018	09/26/2018 09:00	Hoor Shaik	10/01/2018 11:50	Juyoung Kim	2027042
	09/20/2018			09/22/2018 03:00	Dale L. Simmons	2027003
	09/20/2018			09/22/2018 04:27	Dale L. Simmons	2027010
	09/20/2018			09/22/2018 04:45	Dale L. Simmons	2027004
	09/20/2018			09/22/2018 04:56	Dale L. Simmons	2027009
	09/20/2018			09/25/2018 18:36	Dale L. Simmons	2026997
SM 2540 D-97	09/20/2018			09/25/2018 19:46	Dale L. Simmons	2027000
	09/20/2018			09/24/2018 15:00	DeAsia Armster	2026997, 2027000, 2027003, 2027004, 2027009, 2027010
SM 4500 F-C-97	09/20/2018			09/22/2018 04:19	Dale L. Simmons	2027010
	09/20/2018			09/22/2018 04:45	Dale L. Simmons	2027004
	09/20/2018			09/22/2018 04:56	Dale L. Simmons	2027009
	09/20/2018			09/25/2018 18:05	Dale L. Simmons	2026997
	09/20/2018			09/25/2018 18:09	Dale L. Simmons	2027000
	09/20/2018			09/28/2018 11:33	Dale L. Simmons	2027003
SM 5310 B-00	09/20/2018			09/25/2018 06:11	Megan Treadwell	2026998
	09/20/2018			09/25/2018 06:24	Megan Treadwell	2027001
	09/20/2018			09/26/2018 01:07	Megan Treadwell	2027005
	09/20/2018			09/26/2018 01:21	Megan Treadwell	2027006
	09/20/2018			09/26/2018 01:37	Megan Treadwell	2027011
	09/20/2018			09/26/2018 01:51	Megan Treadwell	2027012