

Chemical Analysis Report

NE-DIST-2023-01-11-02

Florida DEP Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **Nassau North 2023**
Request ID: **RQ-2023-01-16-17**
Customer: **NE-DIST**
Project ID: **SMP**

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8800 Baymeadows Way West
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 02-FEB-2023 10:10

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

Case Narrative

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

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

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 by the Florida Department of Health Environmental Laboratory Certification Program 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: Pigeon Creek @ Andrews Rd.

Collection Date/Time: 01/10/2023 09:45

Field ID: 19010098

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2380054	EPA 200.7 Rev. 4.4	Calcium	2.83		mg/L	P424492	
		Cobalt	1.0	U	ug/L	P424492	
		Iron	690		ug/L	P424492	
		Magnesium	0.94		mg/L	P424492	
		Potassium	1.9		mg/L	P424492	
		Sodium	8.9		mg/L	P424492	
		Strontium	12.9		ug/L	P424492	
		Tin	3.0	U	ug/L	P424492	
		Titanium	1.1	I	ug/L	P424492	
		Vanadium	2.0	U	ug/L	P424492	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P424492	
		Aluminum	169		ug/L	P424492	
		Antimony	0.050	U	ug/L	P424492	
		Arsenic	0.32		ug/L	P424492	
		Barium	11.1		ug/L	P424492	
		Beryllium	0.010	U	ug/L	P424492	
		Boron	17.7		ug/L	P424492	
		Cadmium	0.020	U	ug/L	P424492	
		Chromium	0.40	U	ug/L	P424492	
		Copper	0.40	U	ug/L	P424492	
		Lead	0.28	I	ug/L	P424492	
		Manganese	11.3		ug/L	P424492	
		Molybdenum	0.15	U	ug/L	P424492	
		Nickel	0.50	U	ug/L	P424492	
		Selenium	0.20	U	ug/L	P424492	
		Silver	0.010	U	ug/L	P424492	
		Thallium	0.10	U	ug/L	P424492	
	SM 2340 B-2011	Hardness	10.9		mg/L	P424492	

Sample Location: Alligator CR at SR200

Collection Date/Time: 01/10/2023 10:35

Field ID: 19021007

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2380041	DEP SOP: NU-094-1	Color (true)	260		PCU	P424426	
	EPA 180.1 Rev. 2.0	Turbidity	2.4		NTU	P424429	
	EPA 300.0 Rev. 2.1	Chloride	23	A	mg Cl/L	P424722	
		Sulfate	18	A	mg SO4/L	P424725	
	SM 2320 B-2011	Total Alkalinity	27		mg CaCO3/L	P424904	
	SM 2540 C-2015	TDS	158		mg/L	P424911	
	SM 2540 D-2015	TSS	2	U	mg/L	P424820	
	SM 4500-F- C-2011	Fluoride	0.068	I	mg F/L	P424763	RPD
2380042	EPA 350.1 Rev. 2.0	Ammonia-N	0.012		mg N/L	P424567	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P424937	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.028		mg N/L	P424734	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P424593	
	SM 5310 B-2011	Organic Carbon	27		mg C/L	P424574	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Unnamed Branch Above Alligator CR

Collection Date/Time: 01/10/2023 11:10

Field ID: G4NE0288

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2380039	DEP SOP: NU-094-1	Color (true)	220		PCU	P424426	
	EPA 180.1 Rev. 2.0	Turbidity	3.2		NTU	P424429	
	EPA 300.0 Rev. 2.1	Chloride	30		mg Cl/L	P424626	
		Sulfate	30		mg SO4/L	P424629	
	SM 2320 B-2011	Total Alkalinity	46		mg CaCO3/L	P424904	
	SM 2540 C-2015	TDS	220	A	mg/L	P424911	
	SM 2540 D-2015	TSS	2	IA	mg/L	P424820	
	SM 4500-F- C-2011	Fluoride	0.083	I	mg F/L	P424763	RPD
2380040	EPA 350.1 Rev. 2.0	Ammonia-N	0.017		mg N/L	P425159	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P424937	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P424734	
	EPA 365.1 Rev. 2.0	Total-P	0.19		mg P/L	P424593	
	SM 5310 B-2011	Organic Carbon	31		mg C/L	P424574	
2380052	EPA 200.7 Rev. 4.4	Calcium	22.7		mg/L	P424492	
		Cobalt	1.0	U	ug/L	P424492	
		Iron	570		ug/L	P424492	
		Magnesium	8.94		mg/L	P424492	
		Potassium	7.4		mg/L	P424492	
		Sodium	15.9		mg/L	P424492	
		Strontium	96.4		ug/L	P424492	
		Tin	3.0	U	ug/L	P424492	
		Titanium	5.8		ug/L	P424492	
		Vanadium	2.0	U	ug/L	P424492	
		Zinc	5.0	U	ug/L	P424492	
	EPA 200.8 Rev. 5.4	Aluminum	245		ug/L	P424492	
		Antimony	0.074	I	ug/L	P424492	
		Arsenic	0.74		ug/L	P424492	
		Barium	27.8		ug/L	P424492	
		Beryllium	0.022	I	ug/L	P424492	
		Boron	22.5		ug/L	P424492	
		Cadmium	0.020	U	ug/L	P424492	
		Chromium	0.52	I	ug/L	P424492	
		Copper	0.81		ug/L	P424492	
		Lead	0.20	U	ug/L	P424492	
		Manganese	29.5		ug/L	P424492	
		Molybdenum	0.34	I	ug/L	P424492	
		Nickel	0.71	I	ug/L	P424492	
		Selenium	0.20	U	ug/L	P424492	
		Silver	0.010	U	ug/L	P424492	
		Thallium	0.10	U	ug/L	P424492	
	SM 2340 B-2011	Hardness	93.5		mg/L	P424492	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Plummer CR @ Wildwood Rd. (FKA Yulee Rd.) Collection Date/Time: 01/10/2023 12:50

Field ID: 19020063

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2380043	EPA 180.1 Rev. 2.0	Turbidity	28		NTU	P424429	
	SM 2320 B-2011	Total Alkalinity	36		mg CaCO3/L	P424904	
	SM 2540 D-2015	TSS	19		mg/L	P424822	
	SM 4500-F- C-2011	Fluoride	0.068	I	mg F/L	P424763	RPD
2380044	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P424567	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P424550	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P424734	
	EPA 365.1 Rev. 2.0	Total-P	0.10		mg P/L	P424593	
	SM 5310 B-2011	Organic Carbon	36		mg C/L	P424574	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P424426

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P424429

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P424492

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Cobalt	1.0	U	ug/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Strontium	2.0	U	ug/L
Tin	3.0	U	ug/L
Titanium	0.75	U	ug/L
Vanadium	2.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P424492

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Barium	0.20	U	ug/L
Beryllium	0.010	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.10	U	ug/L
Molybdenum	0.15	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424626

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424629

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424722

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424725

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424567

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425159

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424550

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424937

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P424734

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424593

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P424904

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

Reference Method: SM 2540 C-2015
Batch ID: P424911

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P424820

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P424822

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P424763

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P424574

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: DEP SOP: NU-094-1
Batch ID: P424426

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	102		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P424429

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P424492

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	100		P	85 - 115
Cobalt	98.7		P	85 - 115
Iron	101		P	85 - 115
Magnesium	98.7		P	85 - 115
Potassium	98.8		P	85 - 115
Sodium	99.3		P	85 - 115
Strontium	99.0		P	85 - 115
Tin	95.9		P	85 - 115
Titanium	97.7		P	85 - 115
Vanadium	94.3		P	85 - 115
Zinc	98.5		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P424492

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	101		P	85 - 115
Antimony	107		P	85 - 115
Arsenic	103		P	85 - 115
Barium	105		P	85 - 115
Beryllium	92.2		P	85 - 115
Boron	106		P	85 - 115
Cadmium	106		P	85 - 115
Chromium	95.3		P	85 - 115
Copper	97.2		P	85 - 115
Lead	98.2		P	85 - 115
Manganese	98.2		P	85 - 115
Molybdenum	100		P	85 - 115
Nickel	99.4		P	85 - 115
Selenium	95.3		P	85 - 115
Silver	102		P	85 - 115
Thallium	101		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424626

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424629

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424722

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424725

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424567

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425159

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424550

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424937

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P424734

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424593

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P424904

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.5		P	94 - 106

Reference Method: SM 2540 C-2015
Batch ID: P424911

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	96.6		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P424820

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	87.7		P	85 - 106

Reference Method: SM 2540 D-2015
Batch ID: P424822

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	96.5		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P424763

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P424574

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P424492

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2379701	Calcium	97.2		P	80 - 120
2379701	Cobalt	101	100	P/P	80 - 120
2379701	Iron	101	100	P/P	80 - 120
2379701	Magnesium	97.0		P	80 - 120
2379701	Potassium	95.4		P	80 - 120
2379701	Sodium	96.9		P	80 - 120
2379701	Strontium	98.8	96.6	P/P	80 - 120
2379701	Tin	96.5	96.3	P/P	80 - 120
2379701	Titanium	100	99.2	P/P	80 - 120
2379701	Vanadium	101	99.9	P/P	80 - 120
2379701	Zinc	102	101	P/P	80 - 120
2380052	Calcium	99.6		P	80 - 120
2380052	Cobalt	100		P	80 - 120
2380052	Iron	101		P	80 - 120
2380052	Magnesium	98.5		P	80 - 120
2380052	Potassium	97.2		P	80 - 120
2380052	Sodium	99.3		P	80 - 120
2380052	Strontium	98.5		P	80 - 120
2380052	Tin	95.8		P	80 - 120
2380052	Titanium	96.4		P	80 - 120
2380052	Vanadium	99.9		P	80 - 120
2380052	Zinc	102		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P424492

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2379701	Aluminum	97.5	96.8	P/P	80 - 120
2379701	Antimony	107	107	P/P	80 - 120
2379701	Arsenic	106	106	P/P	80 - 120
2379701	Barium	104	104	P/P	80 - 120
2379701	Beryllium	94.4	95.3	P/P	80 - 120
2379701	Boron	96.6	96.6	P/P	80 - 120
2379701	Cadmium	107	105	P/P	80 - 120
2379701	Chromium	96.5	96.2	P/P	80 - 120
2379701	Copper	96.1	96.2	P/P	80 - 120
2379701	Lead	98.7	97.0	P/P	80 - 120
2379701	Manganese	98.4	97.7	P/P	80 - 120
2379701	Molybdenum	103	102	P/P	80 - 120
2379701	Nickel	98.6	98.6	P/P	80 - 120
2379701	Selenium	95.1	95.7	P/P	80 - 120
2379701	Silver	99.9	98.7	P/P	80 - 120
2379701	Thallium	106	104	P/P	80 - 120
2380052	Aluminum	91.4		P	80 - 120
2380052	Antimony	107		P	80 - 120
2380052	Arsenic	106		P	80 - 120
2380052	Barium	104		P	80 - 120
2380052	Beryllium	95.8		P	80 - 120
2380052	Boron	101		P	80 - 120
2380052	Cadmium	108		P	80 - 120
2380052	Chromium	97.0		P	80 - 120
2380052	Copper	96.7		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P424492

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2380052	Lead	98.3		P	80 - 120
2380052	Manganese	96.4		P	80 - 120
2380052	Molybdenum	103		P	80 - 120
2380052	Nickel	96.2		P	80 - 120
2380052	Selenium	97.9		P	80 - 120
2380052	Silver	99.7		P	80 - 120
2380052	Thallium	104		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424626

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2379955	Chloride	101		P	90 - 110
2380019	Chloride	99.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424629

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2379955	Sulfate	101		P	90 - 110
2380019	Sulfate	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424722

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2380041	Chloride	96.1		P	90 - 110
2380295	Chloride	97.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424725

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2380041	Sulfate	95.4		P	90 - 110
2380295	Sulfate	98.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424567

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2380070	Ammonia-N	97.6	96.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425159

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2380774	Ammonia-N	102	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424550

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424550

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2379832	Kjeldahl Nitrogen	106	107	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424937

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2379831	Kjeldahl Nitrogen	103	113	P/F	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P424734

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2380042	NO2NO3-N	97.6	98.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424593

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2380070	Total-P	107	107	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P424763

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2380019	Fluoride	94.6	97.6	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P424574

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2380040	Organic Carbon	101		P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P424426

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2380019	Color (true)	0.379	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P424429

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2379873	Turbidity	2.39	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P424492

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2379701	Calcium	2.58	Spike	P	0 - 20
2379701	Cobalt	0.764	Spike	P	0 - 20
2379701	Iron	0.284	Spike	P	0 - 20
2379701	Magnesium	0.254	Spike	P	0 - 20
2379701	Potassium	0.126	Spike	P	0 - 20
2379701	Sodium	1.58	Spike	P	0 - 20
2379701	Strontium	1.60	Spike	P	0 - 20
2379701	Tin	0.170	Spike	P	0 - 20
2379701	Titanium	0.847	Spike	P	0 - 20
2379701	Vanadium	0.920	Spike	P	0 - 20
2379701	Zinc	0.800	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P424492

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2379701	Aluminum	0.594	Spike	P	0 - 20
2379701	Antimony	0.508	Spike	P	0 - 20
2379701	Arsenic	0.523	Spike	P	0 - 20
2379701	Barium	0.232	Spike	P	0 - 20
2379701	Beryllium	0.932	Spike	P	0 - 20
2379701	Boron	0.0211	Spike	P	0 - 20
2379701	Cadmium	1.92	Spike	P	0 - 20
2379701	Chromium	0.262	Spike	P	0 - 20
2379701	Copper	0.0587	Spike	P	0 - 20
2379701	Lead	1.78	Spike	P	0 - 20
2379701	Manganese	0.566	Spike	P	0 - 20
2379701	Molybdenum	0.847	Spike	P	0 - 20
2379701	Nickel	0.0834	Spike	P	0 - 20
2379701	Selenium	0.655	Spike	P	0 - 20
2379701	Silver	1.18	Spike	P	0 - 20
2379701	Thallium	1.81	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424626

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2379955	Chloride	0.257	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424629

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2379955	Sulfate	3.69	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424722

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2380041	Chloride	0.0308	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424725

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2380041	Sulfate	0.0609	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424567

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2380070	Ammonia-N	1.38	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425159

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2380774	Ammonia-N	0.781	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424550

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2379832	Kjeldahl Nitrogen	0.539	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424937

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2379831	Kjeldahl Nitrogen	7.52	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P424734

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2380042	NO2NO3-N	0.892	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424593

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2380070	Total-P	0.526	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P424904

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2380253	Total Alkalinity	0.181	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015
Batch ID: P424911

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2380039	TDS	6.36	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P424763

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2380019	Fluoride	2.48	Spike	F	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P424574

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2380040	Organic Carbon	0.121	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A116833

Included Lab Sample IDs: 2380039

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

Reference Method: DEP SOP: NU-094-1

Run ID: A116847

Included Lab Sample IDs: 2380039, 2380041

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.8	102	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A116849

Included Lab Sample IDs: 2380039, 2380041, 2380043

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	100	P/P	95 - 105

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A116902

Included Lab Sample IDs: 2380042, 2380044

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.8	99.6	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A116906

Included Lab Sample IDs: 2380040, 2380042, 2380044

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.2	96.6	P/P	90 - 110
Organic Carbon	99.4	98.7	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A116936

Included Lab Sample IDs: 2380041

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.6	100	P/P	90 - 110
Sulfate	99.9	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A116939

Included Lab Sample IDs: 2380040, 2380042, 2380044

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	102	P/P	90 - 110
Total-P	102	103	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A116953

Included Lab Sample IDs: 2380040, 2380042, 2380044

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

Reference Method: SM 4500-F- C-2011

Run ID: A117000

Included Lab Sample IDs: 2380039, 2380041, 2380043

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A117038

Included Lab Sample IDs: 2380052, 2380054

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	98.4	101	P/P	90 - 110
Cobalt	104	100	P/P	90 - 110
Iron	97.9	100	P/P	90 - 110
Magnesium	97.8	100	P/P	90 - 110
Potassium	99.2	101	P/P	90 - 110
Sodium	99.9	102	P/P	90 - 110
Strontium	106	101	P/P	90 - 110
Tin	102	98.2	P/P	90 - 110
Titanium	102	99.3	P/P	90 - 110
Vanadium	102	99.3	P/P	90 - 110
Zinc	104	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A117039

Included Lab Sample IDs: 2380044

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A117050

Included Lab Sample IDs: 2380052, 2380054

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.5	99.3	P/P	90 - 110
Antimony	106	107	P/P	90 - 110
Arsenic	103	105	P/P	90 - 110
Barium	102	104	P/P	90 - 110
Beryllium	98.2	100	P/P	90 - 110
Boron	94.5	97.0	P/P	90 - 110
Cadmium	105	105	P/P	90 - 110
Chromium	95.6	95.2	P/P	90 - 110
Copper	97.9	98.0	P/P	90 - 110
Lead	95.7	96.3	P/P	90 - 110
Manganese	97.8	97.7	P/P	90 - 110
Molybdenum	99.8	101	P/P	90 - 110
Nickel	97.7	98.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A117050

Included Lab Sample IDs: 2380052, 2380054

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Selenium	103	105	P/P	90 - 110
Silver	101	102	P/P	90 - 110
Thallium	101	103	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A117062

Included Lab Sample IDs: 2380039, 2380041, 2380043

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	94.5	96.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A117139

Included Lab Sample IDs: 2380040, 2380042

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	105	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A117164

Included Lab Sample IDs: 2380040

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.4	99.0	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				
DEP SOP: NU-094-1	Color (true)	102				0.379	
EPA 180.1 Rev. 2.0	Turbidity	102				2.39	
EPA 200.7 Rev. 4.4	Calcium	100	97.2	99.6			2.58
	Cobalt	98.7	101	100	100		0.764
	Iron	101	101	100	101		0.284
	Magnesium	98.7	97.0	98.5			0.254
	Potassium	98.8	95.4	97.2			0.126
	Sodium	99.3	96.9	99.3			1.58
	Strontium	99.0	98.8	96.6	98.5		1.60
	Tin	95.9	96.5	96.3	95.8		0.170
	Titanium	97.7	100	99.2	96.4		0.847
	Vanadium	94.3	101	99.9	99.9		0.920
	Zinc	98.5	102	101	102		0.800
EPA 200.8 Rev. 5.4	Aluminum	101	97.5	96.8	91.4		0.594
	Antimony	107	107	107	107		0.508
	Arsenic	103	106	106	106		0.523
	Barium	105	104	104	104		0.232
	Beryllium	92.2	94.4	95.3	95.8		0.932
	Boron	106	96.6	96.6	101		0.0211
	Cadmium	106	107	105	108		1.92
	Chromium	95.3	96.5	96.2	97.0		0.262
	Copper	97.2	96.1	96.2	96.7		0.0587
	Lead	98.2	98.7	97.0	98.3		1.78
	Manganese	98.2	98.4	97.7	96.4		0.566
	Molybdenum	100	103	102	103		0.847
	Nickel	99.4	98.6	98.6	96.2		0.0834
	Selenium	95.3	95.1	95.7	97.9		0.655
	Silver	102	99.9	98.7	99.7		1.18
	Thallium	101	106	104	104		1.81
EPA 300.0 Rev. 2.1	Chloride	101	101	99.9		0.257	
	Chloride	98.9	96.1	97.7		0.0308	
	Sulfate	101	101	101		3.69	
	Sulfate	99.6	95.4	98.4		0.0609	
EPA 350.1 Rev. 2.0	Ammonia-N	99.4	97.6	96.0			1.38
	Ammonia-N	101	102	103			0.781
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	106	107			0.539
	Kjeldahl Nitrogen	100	103	113			7.52
EPA 353.2 Rev. 2.0	NO2NO3-N	104	97.6	98.6			0.892
EPA 365.1 Rev. 2.0	Total-P	105	107	107			0.526
SM 2320 B-2011	Total Alkalinity	97.5				0.181	
SM 2540 C-2015	TDS	96.6				6.36	
SM 2540 D-2015	TSS	87.7					
	TSS	96.5					
SM 4500-F- C-2011	Fluoride	100	94.6	97.6			2.48
SM 5310 B-2011	Organic Carbon	96.8	101				0.121

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2380039, 2380041
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2380039, 2380041, 2380043
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2380052, 2380054

Reference Method Descriptions

Method	Description	Associated Samples
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2380052, 2380054
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2380039, 2380041
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2380039, 2380041
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2380040, 2380042, 2380044
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2380040, 2380042, 2380044
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2380040, 2380042, 2380044
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2380040, 2380042, 2380044
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2380039, 2380041, 2380043
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2380052, 2380054
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2380039, 2380041
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2380039, 2380041, 2380043
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2380039, 2380041, 2380043
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2380040, 2380042, 2380044

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	01/11/2023			01/11/2023 14:37	Chandler E Cox	2380039
	01/11/2023			01/11/2023 14:38	Chandler E Cox	2380041
	01/11/2023			01/11/2023 14:24	Khloe J Berg	2380039
EPA 180.1 Rev. 2.0	01/11/2023			01/11/2023 14:25	Khloe J Berg	2380041
	01/11/2023			01/11/2023 14:26	Khloe J Berg	2380043
	01/11/2023	01/12/2023 12:15	George D Taylor	01/23/2023 22:01	McKinley C Carter	2380052
EPA 200.7 Rev. 4.4	01/11/2023	01/12/2023 12:15	George D Taylor	01/23/2023 22:21	McKinley C Carter	2380054
	01/11/2023	01/12/2023 12:15	George D Taylor	01/23/2023 22:55	Megan Whitefoot	2380054
	01/11/2023	01/12/2023 12:15	George D Taylor	01/23/2023 23:04	Megan Whitefoot	2380052
EPA 200.8 Rev. 5.4	01/11/2023			01/14/2023 09:28	Anna M. Plaviak	2380039
	01/11/2023			01/18/2023 20:05	Anna M. Plaviak	2380041
	01/11/2023			01/13/2023 14:38	Ping Hua	2380042
EPA 300.0 Rev. 2.1	01/11/2023			01/13/2023 14:39	Ping Hua	2380044
	01/11/2023			01/30/2023 15:21	Ping Hua	2380040
	01/11/2023	01/17/2023 13:45	Judith K. Clark	01/23/2023 12:01	Samantha L Bates	2380044
EPA 351.2 Rev. 2.0	01/11/2023	01/25/2023 14:17	Samantha L Bates	01/27/2023 12:30	Judith K. Clark	2380040
	01/11/2023	01/25/2023 14:17	Samantha L Bates	01/27/2023 12:31	Judith K. Clark	2380042
	01/11/2023			01/18/2023 11:50	Beverly Y. Sanders	2380042
EPA 353.2 Rev. 2.0	01/11/2023			01/18/2023 11:57	Beverly Y. Sanders	2380040
	01/11/2023			01/18/2023 11:58	Beverly Y. Sanders	2380044
	01/11/2023	01/17/2023 09:53	Adam P Silver	01/18/2023 09:32	James L Waggeberby	2380040
EPA 365.1 Rev. 2.0	01/11/2023	01/17/2023 09:53	Adam P Silver	01/18/2023 09:35	James L Waggeberby	2380042
	01/11/2023	01/17/2023 09:53	Adam P Silver	01/18/2023 09:37	James L Waggeberby	2380044
SM 2320 B-2011	01/11/2023			01/23/2023 17:46	Dale L. Simmons	2380039
	01/11/2023			01/23/2023 17:57	Dale L. Simmons	2380041
	01/11/2023			01/23/2023 18:08	Dale L. Simmons	2380043
SM 2340 B-2011	01/11/2023			01/23/2023 22:01	McKinley C Carter	2380052
	01/11/2023			01/23/2023 22:21	McKinley C Carter	2380054
	01/11/2023			01/13/2023 16:42	Yijie Li	2380039, 2380041
SM 2540 C-2015	01/11/2023			01/13/2023 16:42	Yijie Li	2380039, 2380041, 2380043
SM 2540 D-2015	01/11/2023			01/20/2023 01:41	Adam P Silver	2380039
	01/11/2023			01/20/2023 01:54	Adam P Silver	2380041
	01/11/2023			01/20/2023 02:08	Adam P Silver	2380043
SM 4500-F- C-2011	01/11/2023			01/13/2023 16:03	Khloe J Berg	2380040
	01/11/2023			01/13/2023 22:08	Khloe J Berg	2380042
	01/11/2023			01/13/2023 22:23	Khloe J Berg	2380044