

Chemical Analysis Report

NE-DIST-2023-08-24-01

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

Event Description: **Nassau North**
Request ID: **RQ-2023-08-21-43**
Customer: **NE-DIST**
Project ID: **SMP**

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

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

Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant

Date Certified: 19-SEP-2023 11:12



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: UNNAMED BRANCH ABOVE ALLIGATOR CR Collection Date/Time: 08/23/2023 12:35

Field ID: G4NE0288

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2433501	DEP SOP: NU-094-1	Color (true)	330		PCU	P434325	
	EPA 180.1 Rev. 2.0	Turbidity	4.7		NTU	P434328	
	EPA 300.0 Rev. 2.1	Chloride	20		mg Cl/L	P434532	
		Sulfate	5.8		mg SO4/L	P434535	
	SM 2320 B-2011	Total Alkalinity	49		mg CaCO3/L	P434513	
	SM 2540 C-2015	TDS	177		mg/L	P434503	
	SM 2540 D-2015	TSS	4	I	mg/L	P434433	
2433502	SM 4500-F- C-2011	Fluoride	0.10		mg F/L	P434516	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.095		mg N/L	P434580	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.7		mg N/L	P434729	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.095		mg N/L	P434794	
	EPA 365.1 Rev. 2.0	Total-P	0.46		mg P/L	P434414	
2433520	SM 5310 B-2011	Organic Carbon	39		mg C/L	P434450	
	EPA 200.7 Rev. 4.4	Calcium	18.9		mg/L	P434377	
		Iron	1.22E+03		ug/L	P434377	
		Magnesium	5.66		mg/L	P434377	
		Potassium	6.3		mg/L	P434377	
		Sodium	10		mg/L	P434377	
		Strontium	85.1		ug/L	P434377	
		Tin	3.2	I	ug/L	P434377	
		Titanium	1.4	I	ug/L	P434377	
		Vanadium	2.0	U	ug/L	P434377	
		Zinc	5.0	U	ug/L	P434377	
	EPA 200.8 Rev. 5.4	Aluminum	228		ug/L	P434377	
		Antimony	0.074	I	ug/L	P434377	
		Arsenic	1.37		ug/L	P434377	
		Barium	30.2		ug/L	P434377	
		Beryllium	0.033	I	ug/L	P434377	
		Boron	39.7		ug/L	P434377	
		Cadmium	0.020	U	ug/L	P434377	
		Chromium	0.77	I	ug/L	P434377	
		Cobalt	0.685		ug/L	P434377	
		Copper	0.58	I	ug/L	P434377	
		Lead	0.33	I	ug/L	P434377	
		Manganese	305		ug/L	P434377	
		Molybdenum	0.27	I	ug/L	P434377	
		Nickel	0.70	I	ug/L	P434377	
		Selenium	0.28	I	ug/L	P434377	
		Silver	0.010	U	ug/L	P434377	
		Thallium	0.10	U	ug/L	P434377	
	SM 2340 B-2011	Hardness	70.6		mg/L	P434377	

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 AT WILDWOOD RD (FKA YULEE RD) **Collection Date/Time: 08/23/2023 13:50**

Field ID: 19020063

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2433505	DEP SOP: NU-094-1	Color (true)	920		PCU	P434325	
	EPA 180.1 Rev. 2.0	Turbidity	11	A	NTU	P434329	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P434532	
		Sulfate	0.66		mg SO4/L	P434535	
	SM 2320 B-2011	Total Alkalinity	4.9		mg CaCO3/L	P434513	
	SM 2540 C-2015	TDS	102		mg/L	P434503	
	SM 2540 D-2015	TSS	16		mg/L	P434433	
	SM 4500-F- C-2011	Fluoride	0.056	I	mg F/L	P434516	
2433506	EPA 350.1 Rev. 2.0	Ammonia-N	0.59		mg N/L	P434682	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	3.2		mg N/L	P434958	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.014		mg N/L	P434794	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P434414	
	SM 5310 B-2011	Organic Carbon	67		mg C/L	P434450	

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: PIGEON CREEK AT ANDREWS RD

Collection Date/Time: 08/23/2023 11:40

Field ID: 19010098

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2433521	EPA 200.7 Rev. 4.4	Calcium	2.51		mg/L	P434377	
		Iron	3.93E+03		ug/L	P434377	
		Magnesium	0.77		mg/L	P434377	
		Potassium	0.85	I	mg/L	P434377	
		Sodium	6.1		mg/L	P434377	
		Strontium	13.6		ug/L	P434377	
		Tin	3.0	U	ug/L	P434377	
		Titanium	1.1	I	ug/L	P434377	
		Vanadium	2.0	U	ug/L	P434377	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P434377	
		Aluminum	586		ug/L	P434377	
		Antimony	0.050	U	ug/L	P434377	
		Arsenic	1.06		ug/L	P434377	
		Barium	19.3		ug/L	P434377	
		Beryllium	0.027	I	ug/L	P434377	
		Boron	20.8		ug/L	P434377	
		Cadmium	0.020	U	ug/L	P434377	
		Chromium	0.68	I	ug/L	P434377	
		Cobalt	0.278		ug/L	P434377	
		Copper	0.40	U	ug/L	P434377	
		Lead	1.12		ug/L	P434377	
		Manganese	17.4		ug/L	P434377	
		Molybdenum	0.15	U	ug/L	P434377	
		Nickel	0.64	I	ug/L	P434377	
		Selenium	0.20	U	ug/L	P434377	
		Silver	0.010	U	ug/L	P434377	
		Thallium	0.10	U	ug/L	P434377	
	SM 2340 B-2011	Hardness	9.4		mg/L	P434377	

Ref. Method and Comment:

EPA 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 08/29/2023.

Sample Location: ALLIGATOR CR AT SR200

Collection Date/Time: 08/23/2023 12:15

Field ID: 19021007

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2433503	DEP SOP: NU-094-1	Color (true)	380		PCU	P434325	
	EPA 180.1 Rev. 2.0	Turbidity	3.1		NTU	P434328	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P434602	
		Sulfate	13	A	mg SO4/L	P434535	
	SM 2320 B-2011	Total Alkalinity	24		mg CaCO3/L	P434513	
	SM 2540 C-2015	TDS	98		mg/L	P434503	
	SM 2540 D-2015	TSS	2	U	mg/L	P434433	
	SM 4500-F- C-2011	Fluoride	0.078	I	mg F/L	P434516	
2433504	EPA 350.1 Rev. 2.0	Ammonia-N	0.040		mg N/L	P434580	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P434729	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.17		mg N/L	P434794	
	EPA 365.1 Rev. 2.0	Total-P	0.21		mg P/L	P434414	
	SM 5310 B-2011	Organic Carbon	36		mg C/L	P434450	

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: P434325

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P434328

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P434329

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P434377

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
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: P434377

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
Cobalt	0.020	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

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434532

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434535

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434602

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434580

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434682

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P434729

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P434958

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434794

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P434414

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: P434513

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

Reference Method: SM 2540 C-2015
Batch ID: P434503

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P434433

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P434516

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P434450

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: P434325

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P434328

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P434329

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P434377

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	102		P	85 - 115
Iron	103		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	101		P	85 - 115
Sodium	100		P	85 - 115
Strontium	99.5		P	85 - 115
Tin	107		P	85 - 115
Titanium	99.8		P	85 - 115
Vanadium	102		P	85 - 115
Zinc	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P434377

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	103		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	103		P	85 - 115
Barium	107		P	85 - 115
Beryllium	100		P	85 - 115
Boron	104		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	98.8		P	85 - 115
Cobalt	100		P	85 - 115
Copper	101		P	85 - 115
Lead	98.3		P	85 - 115
Manganese	99.1		P	85 - 115
Molybdenum	101		P	85 - 115
Nickel	101		P	85 - 115
Selenium	103		P	85 - 115
Silver	114		P	85 - 115
Thallium	103		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434532

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434535

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434602

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434580

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434682

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P434729

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P434958

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434794

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: P434414

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P434513

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.6		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P434503

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	91.8		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P434433

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	100		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P434516

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.8		P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P434450

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	93.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P434377

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2433091	Calcium	101	98.9	P/P	80 - 120
2433091	Iron	103	101	P/P	80 - 120
2433091	Magnesium	103	102	P/P	80 - 120
2433091	Potassium	101	101	P/P	80 - 120
2433091	Sodium	97.1	97.6	P/P	80 - 120
2433091	Strontium	97.6	98.2	P/P	80 - 120
2433091	Tin	102	106	P/P	80 - 120
2433091	Titanium	98.7	100	P/P	80 - 120
2433091	Vanadium	99.9	103	P/P	80 - 120
2433091	Zinc	101	103	P/P	80 - 120
2433432	Calcium	98.3		P	80 - 120
2433432	Iron	101		P	80 - 120
2433432	Magnesium	99.9		P	80 - 120
2433432	Potassium	95.8		P	80 - 120
2433432	Sodium	96.3		P	80 - 120
2433432	Strontium	96.2		P	80 - 120
2433432	Tin	105		P	80 - 120
2433432	Titanium	98.9		P	80 - 120
2433432	Vanadium	101		P	80 - 120
2433432	Zinc	102		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P434377

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2433091	Aluminum	104	103	P/P	80 - 120
2433091	Antimony	103	103	P/P	80 - 120
2433091	Arsenic	106	106	P/P	80 - 120
2433091	Barium	109	109	P/P	80 - 120
2433091	Beryllium	99.7	96.3	P/P	80 - 120
2433091	Boron	103	103	P/P	80 - 120
2433091	Cadmium	103	104	P/P	80 - 120
2433091	Chromium	99.3	99.2	P/P	80 - 120
2433091	Cobalt	102	102	P/P	80 - 120
2433091	Copper	105	106	P/P	80 - 120
2433091	Lead	99.9	101	P/P	80 - 120
2433091	Manganese	100	99.9	P/P	80 - 120
2433091	Molybdenum	102	102	P/P	80 - 120
2433091	Nickel	103	104	P/P	80 - 120
2433091	Selenium	104	107	P/P	80 - 120
2433091	Silver	114	115	P/P	80 - 120
2433091	Thallium	106	107	P/P	80 - 120
2433432	Aluminum	103		P	80 - 120
2433432	Antimony	105		P	80 - 120
2433432	Arsenic	103		P	80 - 120
2433432	Barium	110		P	80 - 120
2433432	Beryllium	98.9		P	80 - 120
2433432	Boron	104		P	80 - 120
2433432	Cadmium	106		P	80 - 120
2433432	Chromium	101		P	80 - 120
2433432	Cobalt	99.6		P	80 - 120
2433432	Copper	99.3		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P434377

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2433432	Lead	99.3		P	80 - 120
2433432	Manganese	102		P	80 - 120
2433432	Molybdenum	102		P	80 - 120
2433432	Nickel	99.8		P	80 - 120
2433432	Selenium	106		P	80 - 120
2433432	Silver	116		P	80 - 120
2433432	Thallium	105		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434532

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2433503	Chloride	103		P	90 - 110
2433612	Chloride	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434535

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2433503	Sulfate	101		P	90 - 110
2433612	Sulfate	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434602

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2433273	Chloride	101		P	90 - 110
2433410	Chloride	103		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434580

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2433357	Ammonia-N	97.6	99.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434682

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2434027	Ammonia-N	98.4	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P434729

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2433411	Kjeldahl Nitrogen	103	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P434958

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2433529	Kjeldahl Nitrogen	104	99.2	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434794

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2433357	NO2NO3-N	102	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P434414

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2433411	Total-P	103	104	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P434516

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2433499	Fluoride	103	103	P/P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P434450

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2433617	Organic Carbon	97.0	97.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P434325

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433356	Color (true)	0.909	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P434328

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433208	Turbidity	3.15	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P434329

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433505	Turbidity	2.82	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P434377

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433091	Calcium	1.70	Spike	P	0 - 20
2433091	Iron	1.65	Spike	P	0 - 20
2433091	Magnesium	1.60	Spike	P	0 - 20
2433091	Potassium	0.0697	Spike	P	0 - 20
2433091	Sodium	0.420	Spike	P	0 - 20
2433091	Strontium	0.602	Spike	P	0 - 20
2433091	Tin	3.83	Spike	P	0 - 20
2433091	Titanium	1.64	Spike	P	0 - 20
2433091	Vanadium	2.69	Spike	P	0 - 20
2433091	Zinc	2.17	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P434377

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433091	Aluminum	0.267	Spike	P	0 - 20
2433091	Antimony	0.150	Spike	P	0 - 20
2433091	Arsenic	0.00818	Spike	P	0 - 20
2433091	Barium	0.0584	Spike	P	0 - 20
2433091	Beryllium	3.32	Spike	P	0 - 20
2433091	Boron	0.535	Spike	P	0 - 20
2433091	Cadmium	1.52	Spike	P	0 - 20
2433091	Chromium	0.118	Spike	P	0 - 20
2433091	Cobalt	0.164	Spike	P	0 - 20
2433091	Copper	0.430	Spike	P	0 - 20
2433091	Lead	0.663	Spike	P	0 - 20
2433091	Manganese	0.191	Spike	P	0 - 20
2433091	Molybdenum	0.599	Spike	P	0 - 20
2433091	Nickel	1.30	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P434377

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433091	Selenium	2.31	Spike	P	0 - 20
2433091	Silver	0.992	Spike	P	0 - 20
2433091	Thallium	0.723	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434532

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433503	Chloride	0.243	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434535

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433503	Sulfate	0.572	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434602

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433273	Chloride	0.374	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434580

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433357	Ammonia-N	1.70	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434682

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2434027	Ammonia-N	1.78	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P434729

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433411	Kjeldahl Nitrogen	2.37	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P434958

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: P434958

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433529	Kjeldahl Nitrogen	2.33	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434794

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433357	NO2NO3-N	0.976	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P434414

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433411	Total-P	0.531	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P434513

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433499	Total Alkalinity	0.292	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P434503

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433310	TDS	2.31	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P434516

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433499	Fluoride	0.0	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P434450

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433617	Organic Carbon	0.822	Spike	P	0 - 20

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

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A121232

Included Lab Sample IDs: 2433501, 2433503, 2433505

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A121233

Included Lab Sample IDs: 2433501, 2433503, 2433505

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	97.5	97.5	P/P	95 - 105

Reference Method: SM 5310 B-2011

Run ID: A121294

Included Lab Sample IDs: 2433502, 2433504, 2433506

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.6	96.8	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A121299

Included Lab Sample IDs: 2433520, 2433521

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	102	101	P/P	90 - 110
Antimony	102	104	P/P	90 - 110
Arsenic	104	107	P/P	90 - 110
Barium	105	105	P/P	90 - 110
Beryllium	101	103	P/P	90 - 110
Boron	99.8	96.7	P/P	90 - 110
Cadmium	105	105	P/P	90 - 110
Chromium	103	104	P/P	90 - 110
Cobalt	99.4	101	P/P	90 - 110
Copper	100	103	P/P	90 - 110
Lead	97.7	98.8	P/P	90 - 110
Manganese	103	106	P/P	90 - 110
Molybdenum	102	103	P/P	90 - 110
Nickel	100	102	P/P	90 - 110
Selenium	105	106	P/P	90 - 110
Silver	101	101	P/P	90 - 110
Thallium	101	102	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A121302

Included Lab Sample IDs: 2433520, 2433521

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	95.6	94.2	P/P	90 - 110
Iron	98.8	97.6	P/P	90 - 110
Magnesium	98.1	96.2	P/P	90 - 110
Potassium	95.3	94.5	P/P	90 - 110
Sodium	92.0	91.6	P/P	90 - 110
Strontium	94.6	92.2	P/P	90 - 110
Tin	93.0	94.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A121302

Included Lab Sample IDs: 2433520, 2433521

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Titanium	93.7	94.2	P/P	90 - 110
Vanadium	94.2	93.6	P/P	90 - 110
Zinc	93.9	94.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A121304

Included Lab Sample IDs: 2433502, 2433504, 2433506

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

Reference Method: SM 2320 B-2011

Run ID: A121328

Included Lab Sample IDs: 2433501, 2433503, 2433505

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.3	97.8	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A121328

Included Lab Sample IDs: 2433501, 2433503, 2433505

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A121339

Included Lab Sample IDs: 2433501, 2433505

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.9	100	P/P	90 - 110
Sulfate	99.3	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A121360

Included Lab Sample IDs: 2433502, 2433504

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A121370

Included Lab Sample IDs: 2433503

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.6	99.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A121407

Included Lab Sample IDs: 2433506

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.0	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A121460

Included Lab Sample IDs: 2433502, 2433504, 2433506

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A121469

Included Lab Sample IDs: 2433502, 2433504

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A121578

Included Lab Sample IDs: 2433506

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	107	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)	100				0.909	
EPA 180.1 Rev. 2.0	Turbidity	97.7				3.15	
	Turbidity	97.7				2.82	
EPA 200.7 Rev. 4.4	Calcium	102	101	98.9	98.3		1.70
	Iron	103	103	101	101		1.65
	Magnesium	104	103	102	99.9		1.60
	Potassium	101	101	101	95.8		0.0697
	Sodium	100	97.1	97.6	96.3		0.420
	Strontium	99.5	97.6	98.2	96.2		0.602
	Tin	107	102	106	105		3.83
	Titanium	99.8	98.7	100	98.9		1.64
	Vanadium	102	99.9	103	101		2.69
	Zinc	103	101	103	102		2.17
EPA 200.8 Rev. 5.4	Aluminum	103	104	103	103		0.267
	Antimony	102	103	103	105		0.150
	Arsenic	103	106	106	103		0.0081
	Barium	107	109	109	110		0.0584
	Beryllium	100	99.7	96.3	98.9		3.32
	Boron	104	103	103	104		0.535
	Cadmium	102	103	104	106		1.52
	Chromium	98.8	99.3	99.2	101		0.118
	Cobalt	100	102	102	99.6		0.164
	Copper	101	105	106	99.3		0.430
	Lead	98.3	99.9	101	99.3		0.663
	Manganese	99.1	100	99.9	102		0.191
	Molybdenum	101	102	102	102		0.599
	Nickel	101	103	104	99.8		1.30
	Selenium	103	104	107	106		2.31
	Silver	114	114	115	116		0.992
	Thallium	103	106	107	105		0.723
EPA 300.0 Rev. 2.1	Chloride	101	103	103		0.243	
	Chloride	99.6	101	103		0.374	
	Sulfate	101	101	102		0.572	
EPA 350.1 Rev. 2.0	Ammonia-N	99.6	97.6	99.4			1.70
	Ammonia-N	97.6	98.4	101			1.78
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	103	100			2.37
	Kjeldahl Nitrogen	105	104	99.2			2.33
EPA 353.2 Rev. 2.0	NO2NO3-N	104	102	103			0.976
EPA 365.1 Rev. 2.0	Total-P	103	103	104			0.531
SM 2320 B-2011	Total Alkalinity	98.6				0.292	
SM 2540 C-2015	TDS	91.8				2.31	
SM 2540 D-2015	TSS	100					
SM 4500-F- C-2011	Fluoride	99.8	103	103			0.0
SM 5310 B-2011	Organic Carbon	93.4	97.0	97.8			0.822

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2433501, 2433503, 2433505
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2433501, 2433503, 2433505
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2433520, 2433521

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	2433520, 2433521
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2433501, 2433503, 2433505
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2433501, 2433503, 2433505
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2433502, 2433504, 2433506
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2433502, 2433504, 2433506
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2433502, 2433504, 2433506
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2433502, 2433504, 2433506
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2433501, 2433503, 2433505
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2433520, 2433521
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2433501, 2433503, 2433505
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2433501, 2433503, 2433505
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2433501, 2433503, 2433505
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2433502, 2433504, 2433506

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	08/24/2023			08/24/2023 14:49	Anna M. Plaviak	2433501, 2433503
	08/24/2023			08/24/2023 14:50	Anna M. Plaviak	2433505
	08/24/2023			08/24/2023 14:29	Khloe J Berg	2433501
EPA 180.1 Rev. 2.0	08/24/2023			08/24/2023 14:30	Khloe J Berg	2433503
	08/24/2023			08/24/2023 14:36	Khloe J Berg	2433505
	08/24/2023	08/25/2023 13:05	George D Taylor	08/28/2023 18:23	McKinley C Carter	2433520
EPA 200.7 Rev. 4.4	08/24/2023	08/25/2023 13:05	George D Taylor	08/28/2023 18:31	McKinley C Carter	2433521
	08/24/2023	08/25/2023 13:05	George D Taylor	08/28/2023 20:17	Emily M Philpot	2433520
	08/24/2023	08/25/2023 13:05	George D Taylor	08/28/2023 20:27	Emily M Philpot	2433521
EPA 200.8 Rev. 5.4	08/24/2023			08/29/2023 01:38	James L Waggeberby	2433503
	08/24/2023			08/29/2023 02:52	James L Waggeberby	2433501
	08/24/2023			08/29/2023 03:07	James L Waggeberby	2433505
EPA 300.0 Rev. 2.1	08/24/2023			09/05/2023 23:03	James L Waggeberby	2433503
	08/24/2023			09/05/2023 13:42	Ping Hua	2433502
	08/24/2023			09/05/2023 13:43	Ping Hua	2433504
EPA 350.1 Rev. 2.0	08/24/2023			09/07/2023 11:53	Khloe J Berg	2433506
	08/24/2023	09/08/2023 13:42	Simonne.V. Calhoun	09/12/2023 12:06	Samantha L Bates	2433502
	08/24/2023	09/08/2023 13:42	Simonne.V. Calhoun	09/12/2023 12:07	Samantha L Bates	2433504
EPA 351.2 Rev. 2.0	08/24/2023	09/14/2023 14:03	Simonne.V. Calhoun	09/15/2023 17:11	Samantha L Bates	2433506
	08/24/2023			09/11/2023 12:01	Anna M. Plaviak	2433502
	08/24/2023			09/11/2023 12:02	Anna M. Plaviak	2433504
EPA 353.2 Rev. 2.0	08/24/2023			09/11/2023 12:03	Anna M. Plaviak	2433506
	08/24/2023	08/28/2023 16:10	Adam P Silver	08/29/2023 09:57	James L Waggeberby	2433502
	08/24/2023	08/28/2023 16:10	Adam P Silver	08/29/2023 09:58	James L Waggeberby	2433504
EPA 365.1 Rev. 2.0	08/24/2023	08/28/2023 16:10	Adam P Silver	08/29/2023 09:59	James L Waggeberby	2433506
	08/24/2023			08/30/2023 06:22	Dale L. Simmons	2433501
	08/24/2023			08/30/2023 06:35	Dale L. Simmons	2433503
SM 2320 B-2011	08/24/2023			08/30/2023 06:46	Dale L. Simmons	2433505
	08/24/2023			08/28/2023 18:23	McKinley C Carter	2433520
	08/24/2023			08/28/2023 18:31	McKinley C Carter	2433521
SM 2340 B-2011	08/24/2023			08/25/2023 11:30	Dana G. Hughes	2433501, 2433503, 2433505
SM 2540 C-2015	08/24/2023			08/25/2023 11:30	Dana G. Hughes	2433501, 2433503, 2433505
SM 2540 D-2015	08/24/2023			08/30/2023 06:22	Dale L. Simmons	2433501
	08/24/2023			08/30/2023 06:35	Dale L. Simmons	2433503
	08/24/2023			08/30/2023 06:46	Dale L. Simmons	2433505
SM 4500-F- C-2011	08/24/2023			08/28/2023 22:51	Elise M. Gillis	2433502
	08/24/2023			08/28/2023 23:06	Elise M. Gillis	2433504
	08/24/2023			08/28/2023 23:20	Elise M. Gillis	2433506