

Chemical Analysis Report

SO-DIST-2023-09-27-01

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

Event Description: **2023 SMP : Myakka Cricks**
Request ID: **RQ-2023-09-25-22**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 314
Fort Myers, FL 33901-3381
Attn: Monica Jaeger

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: 16-OCT-2023 16:21



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: Little Alligator Creek at Midway Blvd

Collection Date/Time: 09/26/2023 08:35

Field ID: G3SD0071

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2440920	DEP SOP: NU-094-1	Color (true)	67		PCU	P435605	
	EPA 180.1 Rev. 2.0	Turbidity	2.5		NTU	P435618	
	EPA 300.0 Rev. 2.1	Chloride	4.4E+03		mg Cl/L	P436046	
		Sulfate	660		mg SO4/L	P436049	
	SM 2320 B-2011	Total Alkalinity	137	A	mg CaCO3/L	P435872	
	SM 2540 C-2015	TDS	7.62E+03		mg/L	P436283	
	SM 2540 D-2015	TSS	4	I	mg/L	P436015	
2440922	SM 4500-F- C-2011	Fluoride	0.57		mg F/L	P435874	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.068		mg N/L	P435811	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.80		mg N/L	P435995	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.015		mg N/L	P436206	
	EPA 365.1 Rev. 2.0	Total-P	0.24		mg P/L	P435709	
2440935	SM 5310 B-2011	Organic Carbon	11		mg C/L	P435848	
	EPA 200.7 Rev. 4.4	Calcium	147		mg/L	P435804	
		Iron	92	I	ug/L	P435804	
		Magnesium	277		mg/L	P435804	
		Potassium	92		mg/L	P435804	
		Sodium	2.34E+03		mg/L	P435804	
		Strontium	2.89E+03		ug/L	P435804	
		Tin	9.1	I	ug/L	P435804	
		Titanium	2.2	U	ug/L	P435804	
		Vanadium	6.0	U	ug/L	P435804	
		Zinc	15	U	ug/L	P435804	
	EPA 200.8 Rev. 5.4	Aluminum	50	U	ug/L	P435804	
		Antimony	0.25	I	ug/L	P435804	
		Arsenic	2.86		ug/L	P435804	
		Barium	18.7		ug/L	P435804	
		Beryllium	0.10	U	ug/L	P435804	
		Boron	1.08E+03		ug/L	P435804	
		Cadmium	0.080	U	ug/L	P435804	
		Chromium	1.6	U	ug/L	P435804	
		Cobalt	0.083	I	ug/L	P435804	
		Copper	1.6	U	ug/L	P435804	
		Lead	0.80	U	ug/L	P435804	
		Manganese	21.8		ug/L	P435804	
		Molybdenum	4.4		ug/L	P435804	
		Nickel	2.0	U	ug/L	P435804	
		Selenium	0.80	U	ug/L	P435804	
		Silver	0.040	U	ug/L	P435804	
		Thallium	0.40	U	ug/L	P435804	
	SM 2340 B-2011	Hardness	1.51E+03		mg/L	P435804	

Field ID: G3SD0071

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
-----------	-------------	-----------	--------	------	-------	----------	----------

Ref. Method and Comment:
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium, magnesium, potassium and sodium are unavailable because of high analyte concentration in the QC sample.
EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for boron are unavailable because of high analyte concentration in the QC sample.

Sample Location: Rock Creek at Eisenhower Dr

Collection Date/Time: 09/26/2023 09:15

Field ID: G3SD0070

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2440921	DEP SOP: NU-094-1	Color (true)	250		PCU	P435605	
	EPA 180.1 Rev. 2.0	Turbidity	3.9		NTU	P435618	
	EPA 300.0 Rev. 2.1	Chloride	380		mg Cl/L	P436046	
		Sulfate	85		mg SO4/L	P436049	
	SM 2320 B-2011	Total Alkalinity	80		mg CaCO3/L	P435768	
	SM 2540 C-2015	TDS	838		mg/L	P436283	
	SM 2540 D-2015	TSS	5	I	mg/L	P436015	
2440923	SM 4500-F- C-2011	Fluoride	0.22		mg F/L	P436093	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.12		mg N/L	P436052	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P436043	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.069		mg N/L	P436292	
	EPA 365.1 Rev. 2.0	Total-P	0.47		mg P/L	P436110	
2440936	SM 5310 B-2011	Organic Carbon	22		mg C/L	P435848	
	EPA 200.7 Rev. 4.4	Calcium	43.5		mg/L	P435682	
		Iron	610		ug/L	P435682	
		Magnesium	28.5		mg/L	P435682	
		Potassium	10.2		mg/L	P435682	
		Sodium	199		mg/L	P435682	
		Strontium	1.13E+03		ug/L	P435682	
		Tin	3.0	U	ug/L	P435682	
		Titanium	2.5	I	ug/L	P435682	
		Vanadium	2.0	U	ug/L	P435682	
		Zinc	5.0	U	ug/L	P435682	
	EPA 200.8 Rev. 5.4	Aluminum	128		ug/L	P435682	
		Antimony	0.12	I	ug/L	P435682	
		Arsenic	1.99		ug/L	P435682	
		Barium	9.25		ug/L	P435682	
		Beryllium	0.018	I	ug/L	P435682	
		Boron	119		ug/L	P435682	
		Cadmium	0.020	U	ug/L	P435682	
		Chromium	0.68	I	ug/L	P435682	
		Cobalt	0.124		ug/L	P435682	
		Copper	0.63	I	ug/L	P435682	
		Lead	0.20	I	ug/L	P435682	
		Manganese	19.3		ug/L	P435682	
		Molybdenum	1.14		ug/L	P435682	
		Nickel	0.51	I	ug/L	P435682	
		Selenium	0.20	U	ug/L	P435682	
		Silver	0.010	U	ug/L	P435682	
		Thallium	0.10	U	ug/L	P435682	
	SM 2340 B-2011	Hardness	226		mg/L	P435682	

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: Big Slough Canal

Collection Date/Time: 09/26/2023 09:35

Field ID: G3SD0161

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2440937	EPA 200.7 Rev. 4.4	Calcium	62.9		mg/L	P435682	
		Iron	1.09E+03		ug/L	P435682	
		Magnesium	8.97		mg/L	P435682	
		Potassium	2.5		mg/L	P435682	
		Sodium	40.1		mg/L	P435682	
		Strontium	905		ug/L	P435682	
		Tin	5.4	I	ug/L	P435682	
		Titanium	1.8	I	ug/L	P435682	
		Vanadium	2.0	U	ug/L	P435682	
		Zinc	5.0	U	ug/L	P435682	
	EPA 200.8 Rev. 5.4	Aluminum	81		ug/L	P435682	
		Antimony	0.16	I	ug/L	P435682	
		Arsenic	2.50		ug/L	P435682	
		Barium	15.9		ug/L	P435682	
		Beryllium	0.016	I	ug/L	P435682	
		Boron	41.3		ug/L	P435682	
		Cadmium	0.020	U	ug/L	P435682	
		Chromium	0.78	I	ug/L	P435682	
		Cobalt	0.201		ug/L	P435682	
		Copper	0.72	I	ug/L	P435682	
		Lead	0.29	I	ug/L	P435682	
		Manganese	19.2		ug/L	P435682	
		Molybdenum	1.96		ug/L	P435682	
		Nickel	0.80	I	ug/L	P435682	
		Selenium	0.24	I	ug/L	P435682	
		Silver	0.010	U	ug/L	P435682	
		Thallium	0.10	U	ug/L	P435682	
	SM 2340 B-2011	Hardness	194		mg/L	P435682	

Sample Location: Myakka River (Tidal) at US 41

Collection Date/Time: 09/26/2023 10:00

Field ID: G3SD0068

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2440924	DEP SOP: NU-094-1	Color (true)	330		PCU	P435605	
	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P435618	
	EPA 300.0 Rev. 2.1	Chloride	77		mg Cl/L	P436046	
		Sulfate	58		mg SO4/L	P436049	
	SM 2320 B-2011	Total Alkalinity	53		mg CaCO3/L	P435768	
	SM 2540 C-2015	TDS	331	A	mg/L	P436284	
	SM 2540 D-2015	TSS	3	IA	mg/L	P436016	
	SM 4500-F- C-2011	Fluoride	0.18		mg F/L	P436093	
2440925	EPA 350.1 Rev. 2.0	Ammonia-N	0.11		mg N/L	P436052	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P435772	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.041		mg N/L	P436292	
	EPA 365.1 Rev. 2.0	Total-P	0.63		mg P/L	P436110	
	SM 5310 B-2011	Organic Carbon	28		mg C/L	P435848	

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: FB

Collection Date/Time: 09/26/2023 10:10

Field ID: FB_09262023

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2440926	DEP SOP: NU-094-1	Color (true)	2.5	U	PCU	P435605	
	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P435618	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P436046	
		Sulfate	0.20	U	mg SO4/L	P436049	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P435768	
	SM 2540 C-2015	TDS	15	U	mg/L	P436283	
	SM 2540 D-2015	TSS	2	U	mg/L	P436015	
	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P436093	
2440927	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P436052	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P435772	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P436292	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P436110	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P436003	

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: Big Slough at Butler Park

Collection Date/Time: 09/26/2023 10:40

Field ID: G3SD0168

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2440938	EPA 200.7 Rev. 4.4	Calcium	55.5		mg/L	P435682	
		Iron	1.56E+03		ug/L	P435682	
		Magnesium	9.23		mg/L	P435682	
		Potassium	2.4		mg/L	P435682	
		Sodium	31.0		mg/L	P435682	
		Strontium	724		ug/L	P435682	
		Tin	3.9	I	ug/L	P435682	
		Titanium	1.5	I	ug/L	P435682	
		Vanadium	2.0	U	ug/L	P435682	
		Zinc	5.0	U	ug/L	P435682	
	EPA 200.8 Rev. 5.4	Aluminum	104		ug/L	P435682	
		Antimony	0.11	I	ug/L	P435682	
		Arsenic	2.38		ug/L	P435682	
		Barium	14.6		ug/L	P435682	
		Beryllium	0.019	I	ug/L	P435682	
		Boron	37.2		ug/L	P435682	
		Cadmium	0.020	U	ug/L	P435682	
		Chromium	0.86	I	ug/L	P435682	
		Cobalt	0.293		ug/L	P435682	
		Copper	0.59	I	ug/L	P435682	
		Lead	0.20	U	ug/L	P435682	
		Manganese	30.2		ug/L	P435682	
		Molybdenum	1.20		ug/L	P435682	
		Nickel	0.89	I	ug/L	P435682	
		Selenium	0.20	I	ug/L	P435682	
		Silver	0.010	U	ug/L	P435682	
		Thallium	0.10	U	ug/L	P435682	
	SM 2340 B-2011	Hardness	176		mg/L	P435682	

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P435605

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P435618

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P435682

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 200.7 Rev. 4.4
Batch ID: P435804

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: P435682

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P435682

Component	Result	Code	Units
Lead	0.20	U	ug/L
Manganese	0.12	I	ug/L
Molybdenum	0.15	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.012	I	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P435804

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P436046

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P436049

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435811

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P436052

Component	Result	Code	Units
-----------	--------	------	-------

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P436052

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435772

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435995

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P436043

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P436206

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P436292

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435709

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P436110

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

Reference Method: SM 2320 B-2011
Batch ID: P435768

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

Quality Assurance Report Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P435872

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

Reference Method: SM 2540 C-2015
Batch ID: P436283

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2015
Batch ID: P436284

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P436015

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P436016

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P435874

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P436093

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P435848

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

Reference Method: SM 5310 B-2011
Batch ID: P436003

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: P435605

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.6		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P435618

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P435682

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	102		P	85 - 115
Iron	103		P	85 - 115
Magnesium	105		P	85 - 115
Potassium	101		P	85 - 115
Sodium	100		P	85 - 115
Strontium	99.6		P	85 - 115
Tin	106		P	85 - 115
Titanium	102		P	85 - 115
Vanadium	102		P	85 - 115
Zinc	104		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P435804

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	102		P	80 - 120
Iron	103		P	80 - 120
Magnesium	100		P	80 - 120
Potassium	98.5		P	80 - 120
Sodium	100		P	80 - 120
Strontium	101		P	80 - 120
Tin	103		P	80 - 120
Titanium	101		P	80 - 120
Vanadium	101		P	80 - 120
Zinc	99.3		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P435682

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	97.9		P	85 - 115
Antimony	94.0		P	85 - 115
Arsenic	98.7		P	85 - 115
Barium	98.3		P	85 - 115
Beryllium	95.3		P	85 - 115
Boron	102		P	85 - 115
Cadmium	96.3		P	85 - 115
Chromium	94.2		P	85 - 115
Cobalt	98.4		P	85 - 115
Copper	96.4		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P435682

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Lead	90.8		P	85 - 115
Manganese	94.1		P	85 - 115
Molybdenum	96.2		P	85 - 115
Nickel	97.9		P	85 - 115
Selenium	95.6		P	85 - 115
Silver	107		P	85 - 115
Thallium	99.0		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P435804

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	103		P	85 - 115
Antimony	99.7		P	85 - 115
Arsenic	102		P	85 - 115
Barium	104		P	85 - 115
Beryllium	96.0		P	85 - 115
Boron	105		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	101		P	85 - 115
Cobalt	101		P	85 - 115
Copper	98.8		P	85 - 115
Lead	96.5		P	85 - 115
Manganese	104		P	85 - 115
Molybdenum	100		P	85 - 115
Nickel	99.9		P	85 - 115
Selenium	104		P	85 - 115
Silver	111		P	85 - 115
Thallium	103		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P436046

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P436049

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435811

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P436052

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
-----------	---------	---------	-----------	----------------

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P436052

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.2		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435772

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: P435995

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: P436043

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: P436206

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P436292

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435709

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P436110

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

Reference Method: SM 2320 B-2011
Batch ID: P435768

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.4		P	92 - 105

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P435872

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.1		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P436283

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	94.8		P	90 - 110

Reference Method: SM 2540 C-2015
Batch ID: P436284

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	92.5		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P436015

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	94.6		P	85 - 106

Reference Method: SM 2540 D-2015
Batch ID: P436016

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	93.1		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P435874

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	105		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P436093

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.2		P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P435848

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.2		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P436003

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P435682

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2440487	Calcium	98.8		P	80 - 120
2440487	Iron	102	101	P/P	80 - 120
2440487	Magnesium	104	102	P/P	80 - 120
2440487	Potassium	96.4	98.4	P/P	80 - 120
2440487	Sodium	99.9		P	80 - 120
2440487	Strontium	98.1	99.1	P/P	80 - 120
2440487	Tin	101	103	P/P	80 - 120
2440487	Titanium	92.9	95.4	P/P	80 - 120
2440487	Vanadium	98.6	101	P/P	80 - 120
2440487	Zinc	101	102	P/P	80 - 120
2441075	Calcium	102		P	80 - 120
2441075	Iron	99.7		P	80 - 120
2441075	Magnesium	104		P	80 - 120
2441075	Potassium	97.4		P	80 - 120
2441075	Sodium	99.5		P	80 - 120
2441075	Strontium	99.2		P	80 - 120
2441075	Tin	102		P	80 - 120
2441075	Titanium	101		P	80 - 120
2441075	Vanadium	103		P	80 - 120
2441075	Zinc	102		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P435804

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2440935	Iron	105	99.8	P/P	70 - 130
2440935	Strontium	112	101	P/P	70 - 130
2440935	Tin	100	102	P/P	70 - 130
2440935	Titanium	101	104	P/P	70 - 130
2440935	Vanadium	102	102	P/P	70 - 130
2440935	Zinc	95.2	97.6	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P435682

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2440487	Aluminum	101	98.7	P/P	80 - 120
2440487	Antimony	98.9	98.1	P/P	80 - 120
2440487	Arsenic	99.1	99.7	P/P	80 - 120
2440487	Barium	103	102	P/P	80 - 120
2440487	Beryllium	94.7	96.1	P/P	80 - 120
2440487	Boron	105	104	P/P	80 - 120
2440487	Cadmium	103	101	P/P	80 - 120
2440487	Chromium	95.1	94.9	P/P	80 - 120
2440487	Cobalt	96.9	96.6	P/P	80 - 120
2440487	Copper	93.9	94.5	P/P	80 - 120
2440487	Lead	93.2	93.0	P/P	80 - 120
2440487	Manganese	95.5	95.7	P/P	80 - 120
2440487	Molybdenum	101	100	P/P	80 - 120
2440487	Nickel	94.2	93.7	P/P	80 - 120
2440487	Selenium	97.1	97.7	P/P	80 - 120
2440487	Silver	109	109	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P435682

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2440487	Thallium	104	104	P/P	80 - 120
2441075	Aluminum	87.6		P	80 - 120
2441075	Antimony	93.3		P	80 - 120
2441075	Arsenic	95.2		P	80 - 120
2441075	Barium	97.3		P	80 - 120
2441075	Beryllium	88.9		P	80 - 120
2441075	Boron	97.6		P	80 - 120
2441075	Cadmium	97.5		P	80 - 120
2441075	Chromium	93.5		P	80 - 120
2441075	Cobalt	93.8		P	80 - 120
2441075	Copper	96.7		P	80 - 120
2441075	Lead	95.5		P	80 - 120
2441075	Manganese	92.7		P	80 - 120
2441075	Molybdenum	94.7		P	80 - 120
2441075	Nickel	94.0		P	80 - 120
2441075	Selenium	93.1		P	80 - 120
2441075	Silver	104		P	80 - 120
2441075	Thallium	99.2		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P435804

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2440935	Aluminum	103	102	P/P	70 - 130
2440935	Antimony	99.2	101	P/P	70 - 130
2440935	Arsenic	112	114	P/P	70 - 130
2440935	Barium	105	107	P/P	70 - 130
2440935	Beryllium	108	103	P/P	70 - 130
2440935	Cadmium	92.9	98.2	P/P	70 - 130
2440935	Chromium	104	106	P/P	70 - 130
2440935	Cobalt	99.0	101	P/P	70 - 130
2440935	Copper	95.1	96.8	P/P	70 - 130
2440935	Lead	100	101	P/P	70 - 130
2440935	Manganese	105	105	P/P	70 - 130
2440935	Molybdenum	110	113	P/P	70 - 130
2440935	Nickel	96.7	98.2	P/P	70 - 130
2440935	Selenium	109	114	P/P	70 - 130
2440935	Silver	101	102	P/P	70 - 130
2440935	Thallium	106	108	P/P	70 - 130

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P436046

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2440524	Chloride	105		P	90 - 110
2440730	Chloride	104		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P436049

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2440524	Sulfate	103		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P436049

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2440730	Sulfate	103		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435811

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2440552	Ammonia-N	101	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P436052

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2440875	Ammonia-N	99.2	99.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435772

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2440435	Kjeldahl Nitrogen	97.5	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435995

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2440922	Kjeldahl Nitrogen	105	99.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P436043

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2440819	Kjeldahl Nitrogen	95.5	109	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P436206

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2440516	NO2NO3-N	100	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P436292

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2440540	NO2NO3-N	99.0	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435709

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2440551	Total-P	100	101	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P436110

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2441070	Total-P	100	96.9	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P435874

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2440920	Fluoride	103	103	P/P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P436093

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2441079	Fluoride	97.1	97.1	P/P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P435848

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2441058	Organic Carbon	94.2	98.6	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P436003

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2441891	Organic Carbon	93.6	96.7	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P435605

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2441056	Color (true)	1.72	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P435618

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2440586	Turbidity	3.77	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P435682

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2440487	Calcium	0.768	Spike	P	0 - 20
2440487	Iron	1.39	Spike	P	0 - 20
2440487	Magnesium	1.24	Spike	P	0 - 20
2440487	Potassium	1.62	Spike	P	0 - 20
2440487	Sodium	1.56	Spike	P	0 - 20
2440487	Strontium	1.03	Spike	P	0 - 20
2440487	Tin	1.82	Spike	P	0 - 20
2440487	Titanium	2.02	Spike	P	0 - 20
2440487	Vanadium	1.97	Spike	P	0 - 20
2440487	Zinc	1.47	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P435804

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2440935	Calcium	4.84	Spike	P	0 - 20
2440935	Iron	4.77	Spike	P	0 - 20
2440935	Magnesium	4.85	Spike	P	0 - 20
2440935	Potassium	1.16	Spike	P	0 - 20
2440935	Sodium	2.10	Spike	P	0 - 20
2440935	Strontium	4.04	Spike	P	0 - 20
2440935	Tin	1.60	Spike	P	0 - 20
2440935	Titanium	2.80	Spike	P	0 - 20
2440935	Vanadium	0.277	Spike	P	0 - 20
2440935	Zinc	2.51	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P435682

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2440487	Aluminum	1.14	Spike	P	0 - 20
2440487	Antimony	0.837	Spike	P	0 - 20
2440487	Arsenic	0.593	Spike	P	0 - 20
2440487	Barium	0.694	Spike	P	0 - 20
2440487	Beryllium	1.41	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P435682

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2440487	Boron	0.927	Spike	P	0 - 20
2440487	Cadmium	1.27	Spike	P	0 - 20
2440487	Chromium	0.169	Spike	P	0 - 20
2440487	Cobalt	0.341	Spike	P	0 - 20
2440487	Copper	0.540	Spike	P	0 - 20
2440487	Lead	0.281	Spike	P	0 - 20
2440487	Manganese	0.273	Spike	P	0 - 20
2440487	Molybdenum	0.601	Spike	P	0 - 20
2440487	Nickel	0.429	Spike	P	0 - 20
2440487	Selenium	0.606	Spike	P	0 - 20
2440487	Silver	0.0570	Spike	P	0 - 20
2440487	Thallium	0.278	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P435804

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2440935	Aluminum	1.32	Spike	P	0 - 20
2440935	Antimony	1.86	Spike	P	0 - 20
2440935	Arsenic	1.77	Spike	P	0 - 20
2440935	Barium	1.57	Spike	P	0 - 20
2440935	Beryllium	4.71	Spike	P	0 - 20
2440935	Boron	0.0573	Spike	P	0 - 20
2440935	Cadmium	5.57	Spike	P	0 - 20
2440935	Chromium	1.12	Spike	P	0 - 20
2440935	Cobalt	2.07	Spike	P	0 - 20
2440935	Copper	1.73	Spike	P	0 - 20
2440935	Lead	0.948	Spike	P	0 - 20
2440935	Manganese	0.448	Spike	P	0 - 20
2440935	Molybdenum	2.33	Spike	P	0 - 20
2440935	Nickel	1.62	Spike	P	0 - 20
2440935	Selenium	4.04	Spike	P	0 - 20
2440935	Silver	1.40	Spike	P	0 - 20
2440935	Thallium	1.95	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P436046

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2440524	Chloride	0.376	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P436049

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2440524	Sulfate	0.189	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435811

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2440552	Ammonia-N	0.979	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P436052

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2440875	Ammonia-N	0.474	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435772

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2440435	Kjeldahl Nitrogen	1.44	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435995

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2440922	Kjeldahl Nitrogen	4.56	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P436043

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2440819	Kjeldahl Nitrogen	7.38	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P436206

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2440516	NO2NO3-N	0.990	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P436292

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2440540	NO2NO3-N	1.50	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435709

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2440551	Total-P	0.480	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P436110

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2441070	Total-P	2.43	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P435768

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2441080	Total Alkalinity	0.815	Sample	P	0 - 3.9

Reference Method: SM 2320 B-2011
Batch ID: P435872

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2440920	Total Alkalinity	2.67	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P436283

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2440475	TDS	1.94	Sample	P	0 - 10

Reference Method: SM 2540 C-2015
Batch ID: P436284

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2440924	TDS	9.06	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P435874

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2440920	Fluoride	0.0	Spike	P	0 - 1.9

Reference Method: SM 4500-F- C-2011
Batch ID: P436093

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2441079	Fluoride	0.0	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P435848

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2441058	Organic Carbon	3.15	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P436003

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2441891	Organic Carbon	2.82	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: A121796

Included Lab Sample IDs: 2440920, 2440921, 2440924, 2440926

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.4	101	P/P	90 - 110
Color (true)	99.7	99.0	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A121800

Included Lab Sample IDs: 2440920, 2440921, 2440924, 2440926

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	101	P/P	95 - 105
Turbidity	101	100	P/P	95 - 105

Reference Method: SM 2320 B-2011

Run ID: A121863

Included Lab Sample IDs: 2440921, 2440924, 2440926

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.1	95.5	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A121868

Included Lab Sample IDs: 2440936, 2440937, 2440938

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	102	P/P	90 - 110
Iron	100	100	P/P	90 - 110
Magnesium	101	100	P/P	90 - 110
Potassium	98.9	99.4	P/P	90 - 110
Sodium	99.6	101	P/P	90 - 110
Strontium	99.1	97.0	P/P	90 - 110
Tin	99.5	101	P/P	90 - 110
Titanium	98.3	99.1	P/P	90 - 110
Vanadium	97.9	98.7	P/P	90 - 110
Zinc	99.2	99.6	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A121869

Included Lab Sample IDs: 2440936, 2440937, 2440938

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	93.6	95.5	P/P	90 - 110
Antimony	92.3	92.9	P/P	90 - 110
Arsenic	95.3	95.9	P/P	90 - 110
Barium	94.9	96.0	P/P	90 - 110
Beryllium	93.5	94.4	P/P	90 - 110
Boron	95.0	96.1	P/P	90 - 110
Cadmium	97.1	97.1	P/P	90 - 110
Chromium	95.9	96.2	P/P	90 - 110
Cobalt	94.4	94.2	P/P	90 - 110
Copper	92.3	92.9	P/P	90 - 110
Manganese	95.5	95.1	P/P	90 - 110
Molybdenum	94.8	94.7	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A121869

Included Lab Sample IDs: 2440936, 2440937, 2440938

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Nickel	93.2	93.5	P/P	90 - 110
Selenium	95.6	95.3	P/P	90 - 110
Silver	95.9	96.0	P/P	90 - 110
Thallium	95.2	95.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A121874

Included Lab Sample IDs: 2440922

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A121884

Included Lab Sample IDs: 2440936, 2440937, 2440938

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Lead	95.5	94.9	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A121885

Included Lab Sample IDs: 2440922

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

Reference Method: SM 5310 B-2011

Run ID: A121902

Included Lab Sample IDs: 2440922, 2440923, 2440925

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.5	97.8	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A121914

Included Lab Sample IDs: 2440920

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	94.7	95.6	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A121914

Included Lab Sample IDs: 2440920

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A121931

Included Lab Sample IDs: 2440935

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	94.0	95.0	P/P	90 - 110
Arsenic	101	101	P/P	90 - 110
Barium	99.6	102	P/P	90 - 110
Beryllium	101	98.2	P/P	90 - 110
Cadmium	98.6	98.3	P/P	90 - 110
Chromium	98.6	103	P/P	90 - 110
Cobalt	101	98.9	P/P	90 - 110
Copper	99.6	97.2	P/P	90 - 110
Lead	93.6	92.8	P/P	90 - 110
Manganese	98.9	106	P/P	90 - 110
Molybdenum	98.7	97.5	P/P	90 - 110
Nickel	99.8	98.2	P/P	90 - 110
Selenium	99.0	103	P/P	90 - 110
Silver	100	99.1	P/P	90 - 110
Thallium	97.9	97.1	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A121939

Included Lab Sample IDs: 2440935

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	103	101	P/P	90 - 110
Iron	103	101	P/P	90 - 110
Magnesium	101	98.0	P/P	90 - 110
Potassium	100	103	P/P	90 - 110
Sodium	101	102	P/P	90 - 110
Strontium	96.4	99.5	P/P	90 - 110
Tin	97.7	97.3	P/P	90 - 110
Titanium	98.7	98.6	P/P	90 - 110
Vanadium	97.3	96.8	P/P	90 - 110
Zinc	95.8	97.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A121940

Included Lab Sample IDs: 2440925, 2440927

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.1	95.8	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A121948

Included Lab Sample IDs: 2440920, 2440921, 2440924, 2440926

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	103	P/P	90 - 110
Sulfate	103	105	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A121963

Included Lab Sample IDs: 2440935

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.4	98.8	P/P	90 - 110
Boron	102	104	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A121969

Included Lab Sample IDs: 2440927

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.8	94.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A121980

Included Lab Sample IDs: 2440923, 2440925, 2440927

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.9	98.6	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A121987

Included Lab Sample IDs: 2440921, 2440924, 2440926

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	98.6	P/P	90 - 110
Fluoride	98.6	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A122007

Included Lab Sample IDs: 2440922, 2440923

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.1	99.7	P/P	90 - 110
Kjeldahl Nitrogen	97.3	94.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A122028

Included Lab Sample IDs: 2440923, 2440925

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A122029

Included Lab Sample IDs: 2440922

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A122031

Included Lab Sample IDs: 2440927

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.2	99.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A122051

Included Lab Sample IDs: 2440923, 2440925, 2440927

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	102	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			LCS	Precision SMP	MS
DEP SOP: NU-094-1	Color (true)	98.6					1.72	
EPA 180.1 Rev. 2.0	Turbidity	105					3.77	
EPA 200.7 Rev. 4.4	Calcium	102	98.8	102				0.768
	Calcium	102						4.84
	Iron	103	102	101	99.7			1.39
	Iron	103	105	99.8				4.77
	Magnesium	105	104	102	104			1.24
	Magnesium	100						4.85
	Potassium	101	96.4	98.4	97.4			1.62
	Potassium	98.5						1.16
	Sodium	100	99.9	99.5				1.56
	Sodium	100						2.10
	Strontium	99.6	98.1	99.1	99.2			1.03
	Strontium	101	112	101				4.04
	Tin	106	101	103	102			1.82
	Tin	103	100	102				1.60
	Titanium	102	92.9	95.4	101			2.02
	Titanium	101	101	104				2.80
	Vanadium	102	98.6	101	103			1.97
	Vanadium	101	102	102				0.277
	Zinc	104	101	102	102			1.47
	Zinc	99.3	95.2	97.6				2.51
EPA 200.8 Rev. 5.4	Aluminum	97.9	101	98.7	87.6			1.14
	Aluminum	103	103	102				1.32
	Antimony	94.0	98.9	98.1	93.3			0.837
	Antimony	99.7	99.2	101				1.86
	Arsenic	98.7	99.1	99.7	95.2			0.593
	Arsenic	102	112	114				1.77
	Barium	98.3	103	102	97.3			0.694
	Barium	104	105	107				1.57
	Beryllium	95.3	94.7	96.1	88.9			1.41
	Beryllium	96.0	108	103				4.71
	Boron	102	105	104	97.6			0.927
	Boron	105						0.0573
	Cadmium	96.3	103	101	97.5			1.27
	Cadmium	103	92.9	98.2				5.57
	Chromium	94.2	95.1	94.9	93.5			0.169
	Chromium	101	104	106				1.12
	Cobalt	98.4	96.9	96.6	93.8			0.341
	Cobalt	101	99.0	101				2.07
	Copper	96.4	93.9	94.5	96.7			0.540
	Copper	98.8	95.1	96.8				1.73
	Lead	90.8	95.5	93.2	93.0			0.281
	Lead	96.5	100	101				0.948
	Manganese	94.1	95.5	95.7	92.7			0.273
	Manganese	104	105	105				0.448
	Molybdenum	96.2	101	100	94.7			0.601
	Molybdenum	100	110	113				2.33
	Nickel	97.9	94.2	93.7	94.0			0.429
	Nickel	99.9	96.7	98.2				1.62
	Selenium	95.6	97.1	97.7	93.1			0.606
	Selenium	104	109	114				4.04
	Silver	107	109	109	104			0.0570
	Silver	111	101	102				1.40

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision	
			LCS	SMP	MS	SMP	MS
EPA 200.8 Rev. 5.4	Thallium	99.0	104	104	99.2		0.278
	Thallium	103	106	108			1.95
EPA 300.0 Rev. 2.1	Chloride	105	105	104		0.376	
	Sulfate	107	103	103		0.189	
EPA 350.1 Rev. 2.0	Ammonia-N	103	101	102			0.979
	Ammonia-N	98.2	99.2	99.8			0.474
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	97.5	100			1.44
	Kjeldahl Nitrogen	101	105	99.7			4.56
	Kjeldahl Nitrogen	105	95.5	109			7.38
EPA 353.2 Rev. 2.0	NO2NO3-N	98.5	100	102			0.990
	NO2NO3-N	100	99.0	100			1.50
EPA 365.1 Rev. 2.0	Total-P	98.9	100	101			0.480
	Total-P	100	100	96.9			2.43
SM 2320 B-2011	Total Alkalinity	96.4				0.815	
	Total Alkalinity	97.1				2.67	
SM 2540 C-2015	TDS	94.8				1.94	
	TDS	92.5				9.06	
SM 2540 D-2015	TSS	94.6					
	TSS	93.1					
SM 4500-F- C-2011	Fluoride	105	103	103			0.0
	Fluoride	99.2	97.1	97.1			0.0
SM 5310 B-2011	Organic Carbon	95.2	94.2	98.6			3.15
	Organic Carbon	95.4	93.6	96.7			2.82

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2440920, 2440921, 2440924, 2440926
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2440920, 2440921, 2440924, 2440926
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2440935, 2440936, 2440937, 2440938
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2440935, 2440936, 2440937, 2440938
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2440920, 2440921, 2440924, 2440926
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2440920, 2440921, 2440924, 2440926
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2440922, 2440923, 2440925, 2440927
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2440922, 2440923, 2440925, 2440927
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2440922, 2440923, 2440925, 2440927
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2440922, 2440923, 2440925, 2440927
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2440920, 2440921, 2440924, 2440926
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2440935, 2440936, 2440937, 2440938
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2440920, 2440921, 2440924, 2440926
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2440920, 2440921, 2440924, 2440926
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2440920, 2440921, 2440924, 2440926
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2440922, 2440923, 2440925, 2440927

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	09/27/2023			09/27/2023 15:18	Alexis Price	2440920
	09/27/2023			09/27/2023 15:20	Alexis Price	2440926
	09/27/2023			09/27/2023 15:52	Alexis Price	2440921
	09/27/2023			09/27/2023 15:53	Alexis Price	2440924
EPA 180.1 Rev. 2.0	09/27/2023			09/27/2023 13:58	Alexis Price	2440920
	09/27/2023			09/27/2023 13:59	Alexis Price	2440921
	09/27/2023			09/27/2023 14:00	Alexis Price	2440924
	09/27/2023			09/27/2023 14:01	Alexis Price	2440926
EPA 200.7 Rev. 4.4	09/27/2023	09/28/2023 13:30	George D Taylor	09/29/2023 15:28	McKinley C Carter	2440936
	09/27/2023	09/28/2023 13:30	George D Taylor	09/29/2023 15:35	McKinley C Carter	2440937
	09/27/2023	09/28/2023 13:30	George D Taylor	09/29/2023 15:43	McKinley C Carter	2440938
	09/27/2023	10/02/2023 12:30	George D Taylor	10/03/2023 09:02	McKinley C Carter	2440935
EPA 200.8 Rev. 5.4	09/27/2023	10/02/2023 12:30	George D Taylor	10/03/2023 09:33	McKinley C Carter	2440935
	09/27/2023	09/28/2023 13:30	George D Taylor	09/29/2023 19:00	Conrad Hartmann	2440936
	09/27/2023	09/28/2023 13:30	George D Taylor	09/29/2023 19:10	Conrad Hartmann	2440937
	09/27/2023	09/28/2023 13:30	George D Taylor	09/29/2023 19:20	Conrad Hartmann	2440938
	09/27/2023	09/28/2023 13:30	George D Taylor	10/02/2023 14:48	Conrad Hartmann	2440936
	09/27/2023	09/28/2023 13:30	George D Taylor	10/02/2023 14:54	Conrad Hartmann	2440937
	09/27/2023	09/28/2023 13:30	George D Taylor	10/02/2023 15:01	Conrad Hartmann	2440938
	09/27/2023	10/02/2023 12:30	George D Taylor	10/03/2023 15:28	Emily M Philpot	2440935
EPA 300.0 Rev. 2.1	09/27/2023	10/02/2023 12:30	George D Taylor	10/03/2023 17:13	Emily M Philpot	2440935
	09/27/2023	10/02/2023 12:30	George D Taylor	10/04/2023 15:29	Emily M Philpot	2440935
	09/27/2023			10/05/2023 03:18	James L Waggeberby	2440920
	09/27/2023			10/05/2023 03:33	James L Waggeberby	2440921
	09/27/2023			10/05/2023 03:48	James L Waggeberby	2440924
	09/27/2023			10/05/2023 04:03	James L Waggeberby	2440926
	09/27/2023			10/02/2023 13:56	Ping Hua	2440922
	09/27/2023			10/05/2023 11:55	Ping Hua	2440923
EPA 350.1 Rev. 2.0	09/27/2023			10/05/2023 11:57	Ping Hua	2440925
	09/27/2023			10/05/2023 11:58	Ping Hua	2440927
	09/27/2023	10/03/2023 09:32	Samantha L Bates	10/04/2023 09:54	Samantha L Bates	2440925
	09/27/2023	10/03/2023 09:32	Samantha L Bates	10/04/2023 09:56	Samantha L Bates	2440927
EPA 351.2 Rev. 2.0	09/27/2023	10/05/2023 11:45	Simonne.V. Calhoun	10/06/2023 11:05	Samantha L Bates	2440922
	09/27/2023	10/05/2023 11:45	Simonne.V. Calhoun	10/06/2023 11:28	Samantha L Bates	2440923
EPA 353.2 Rev. 2.0	09/27/2023			10/09/2023 13:38	Fadila Guebre	2440922
	09/27/2023			10/10/2023 10:47	Anna M. Plaviak	2440923
	09/27/2023			10/10/2023 10:48	Anna M. Plaviak	2440925
	09/27/2023			10/10/2023 10:49	Anna M. Plaviak	2440927
EPA 365.1 Rev. 2.0	09/27/2023	09/29/2023 10:00	Simonne.V. Calhoun	09/29/2023 14:16	Chandler E Cox	2440922
	09/27/2023	10/06/2023 14:30	Alexis Price	10/09/2023 14:16	James L Waggeberby	2440923, 2440925

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	09/27/2023	10/06/2023 14:30	Alexis Price	10/09/2023 16:50	James L Waggeberby	2440927
SM 2320 B-2011	09/27/2023			09/30/2023 00:25	Adam P Silver	2440924
	09/27/2023			09/30/2023 00:34	Adam P Silver	2440926
	09/27/2023			09/30/2023 01:53	Adam P Silver	2440921
	09/27/2023			10/03/2023 01:06	Adam P Silver	2440920
SM 2340 B-2011	09/27/2023			09/29/2023 15:28	McKinley C Carter	2440936
	09/27/2023			09/29/2023 15:35	McKinley C Carter	2440937
	09/27/2023			09/29/2023 15:43	McKinley C Carter	2440938
	09/27/2023			10/03/2023 09:02	McKinley C Carter	2440935
SM 2540 C-2015	09/27/2023			10/02/2023 15:37	Yijie Li	2440920, 2440921, 2440924, 2440926
SM 2540 D-2015	09/27/2023			10/02/2023 15:27	Yijie Li	2440920, 2440921, 2440924, 2440926
SM 4500-F- C-2011	09/27/2023			10/02/2023 22:51	Adam P Silver	2440920
	09/27/2023			10/06/2023 05:50	Adam P Silver	2440924
	09/27/2023			10/06/2023 05:55	Adam P Silver	2440926
	09/27/2023			10/06/2023 06:42	Adam P Silver	2440921
SM 5310 B-2011	09/27/2023			10/03/2023 03:43	Elise M. Gillis	2440922
	09/27/2023			10/03/2023 04:06	Elise M. Gillis	2440923
	09/27/2023			10/03/2023 04:20	Elise M. Gillis	2440925
	09/27/2023			10/04/2023 16:57	Elise M. Gillis	2440927