Chemical Analysis Report

SO-DIST-2013-02-21-01

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

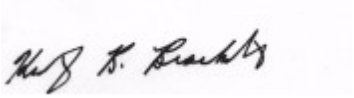
Event Description: **Tamiami Canal Criteria**
Request ID: **RQ-2013-02-11-19**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901
Attn: Ben Paswater

For additional information please contact
Timothy W. Fitzpatrick
Liang-Tsair Lin, Ph.D.
Colin Wright, Ph.D.
Kathryn Brackett
Thekkekalathil Chandrasekhar, PhD, QA Officer
Phone (850) 245-8085

Certified by: Kathryn Brackett, Environmental Administrator

Date Certified: 08-MAR-2013 16:31



Abbreviations and data remark codes

CERT # - NELAP (National Environmental Laboratory Accreditation Program) Certification Number of the laboratory that performed the analysis.
LCS – Laboratory Control Sample; in the QC Failures column, this notation indicates a batch recovery failure.
MS – Matrix Spike; in the QC Failures column, this notation indicates a batch recovery failure.
RPD – Relative Percent Difference; in the QC Failures column, this notation indicates a batch failure for precision.
CCV – Continuing Calibration Verification; in the QC Failures column, this notation indicates a failure of the calibration verification check sample.
SUR – Surrogate; in the QC Failures column, this notation indicates a recovery failure for the associated surrogate.
RSD – Relative Standard Deviation expressed as a percentage.
SMP – Sample.
** - The laboratory is not NELAP certified for this analyte/method, or certification is not applicable.

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
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).

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.

Precision is reported as relative percent difference unless otherwise noted.

Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published test performance acceptance criteria.

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.

All sample collection performed by Bureau of Laboratories staff followed the field Standard Operating Procedures adopted by reference in Rule 62-160 FAC unless otherwise noted.

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.

Results for NELAP accredited tests contained in this report meet the requirements specified by the National Environmental Laboratory Accreditation Conference (NELAC). All samples received were in acceptable condition and met NELAC requirements unless otherwise noted. Results generated in this report pertain to the samples collected and submitted for analysis.

Sample Location: RQ-2013-01-21-26 SITE #6 TMT **Collection Date/Time: 02/20/2013 10:19 AM**

Field ID: SD022013-1 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1485627	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P249663	
	EPA 300.0 Rev. 2.1	Chloride	23		mg Cl/L	P249905	
		Sulfate	0.90		mg SO4/L	P249920	
	SM 2120 B	Color (true)	21		PCU	P249655	
	SM 2320 B-97	Alkalinity	214		mg CaCO3/L	P249790	
	SM 2540 C-97	TDS	256		mg/L	P249914	
	SM 2540 D-97	TSS	3	I	mg/L	P249934	
	SM 4500 F-C-97	Fluoride	0.094	I	mg F/L	P249792	
1485633	SM 5310 B-00 dissolved	Organic Carbon	14		mg C/L	P249861	
1485639	EPA 350.1 Rev. 2.0	Ammonia-N	0.38		mg N/L	P249768	MS
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P249751	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.092		mg N/L	P249799	
	EPA 365.1 Rev. 2.0	Total-P	0.064		mg P/L	P249743	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P249861	
1485645	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.025		mg P/L	P249636	

Ref. Method and Comment:
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.
EPA 351.2 Rev. 2.0: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

Sample Location: RQ-2013-01-21-26 SITE #7A TMT **Collection Date/Time: 02/20/2013 11:00 AM**

Field ID: SD022013-2 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1485628	EPA 180.1 Rev. 2.0	Turbidity	1.1		NTU	P249663	
	EPA 300.0 Rev. 2.1	Chloride	28		mg Cl/L	P249905	
		Sulfate	1.9		mg SO4/L	P249920	
	SM 2120 B	Color (true)	15		PCU	P249655	
	SM 2320 B-97	Alkalinity	212		mg CaCO3/L	P249790	
	SM 2540 C-97	TDS	256		mg/L	P249914	
	SM 2540 D-97	TSS	4	I	mg/L	P249934	
	SM 4500 F-C-97	Fluoride	0.050	I	mg F/L	P249792	
1485634	SM 5310 B-00 dissolved	Organic Carbon	6.4		mg C/L	P249861	
1485640	EPA 350.1 Rev. 2.0	Ammonia-N	0.059		mg N/L	P249768	MS
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.64		mg N/L	P249751	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.071		mg N/L	P249799	
	EPA 365.1 Rev. 2.0	Total-P	0.034		mg P/L	P249743	
	SM 5310 B-00	Organic Carbon	6.9		mg C/L	P249861	
1485646	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.021		mg P/L	P249637	

Ref. Method and Comment:
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.
EPA 351.2 Rev. 2.0: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

Sample Location: RQ-2013-01-21-26 SITE #7B TMT **Collection Date/Time: 02/20/2013 12:02 PM**

Field ID: SD022013-4 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1485630	EPA 180.1 Rev. 2.0	Turbidity	0.60		NTU	P249664	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P249905	
		Sulfate	0.79		mg SO4/L	P249920	
	SM 2120 B	Color (true)	19		PCU	P249655	
	SM 2320 B-97	Alkalinity	207		mg CaCO3/L	P249790	
	SM 2540 C-97	TDS	236	A	mg/L	P249915	
	SM 2540 D-97	TSS	3	I	mg/L	P249935	
	SM 4500 F-C-97	Fluoride	0.045	I	mg F/L	P249792	
1485636	SM 5310 B-00 dissolved	Organic Carbon	7.1		mg C/L	P249861	
1485642	EPA 350.1 Rev. 2.0	Ammonia-N	0.017	I	mg N/L	P249768	MS
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.66		mg N/L	P249751	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.010		mg N/L	P249799	
	EPA 365.1 Rev. 2.0	Total-P	0.026		mg P/L	P249743	
	SM 5310 B-00	Organic Carbon	7.5		mg C/L	P249860	
1485648	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.009	I	mg P/L	P249637	

Ref. Method and Comment:
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.
EPA 351.2 Rev. 2.0: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

Sample Location: RQ-2013-01-21-26 SITE #7C TMT **Collection Date/Time: 02/20/2013 11:35 AM**

Field ID: SD022013-3 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1485629	EPA 180.1 Rev. 2.0	Turbidity	0.75		NTU	P249663	
	EPA 300.0 Rev. 2.1	Chloride	12		mg Cl/L	P249905	
		Sulfate	0.71		mg SO4/L	P249920	
	SM 2120 B	Color (true)	15		PCU	P249655	
	SM 2320 B-97	Alkalinity	212		mg CaCO3/L	P249790	
	SM 2540 C-97	TDS	235		mg/L	P249915	
	SM 2540 D-97	TSS	4	I	mg/L	P249935	
	SM 4500 F-C-97	Fluoride	0.046	I	mg F/L	P249792	
1485635	SM 5310 B-00 dissolved	Organic Carbon	5.7		mg C/L	P249861	
1485641	EPA 350.1 Rev. 2.0	Ammonia-N	0.020		mg N/L	P249768	MS
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.37		mg N/L	P249751	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.012		mg N/L	P249799	
	EPA 365.1 Rev. 2.0	Total-P	0.025		mg P/L	P249743	
	SM 5310 B-00	Organic Carbon	6.2		mg C/L	P249860	
1485647	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.012		mg P/L	P249637	

Ref. Method and Comment:
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.
EPA 351.2 Rev. 2.0: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

Sample Location: RQ-2013-01-21-26 SITE #8 TMT **Collection Date/Time: 02/20/2013 01:00 PM**

Field ID: SD022013-6 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures

Field ID: SD022013-6 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1485632	EPA 180.1 Rev. 2.0	Turbidity	3.0	A	NTU	P249664	
	EPA 300.0 Rev. 2.1	Chloride	3.5E+03		mg Cl/L	P249905	
		Sulfate	430		mg SO4/L	P249920	
	SM 2120 B	Color (true)	110		PCU	P249655	
	SM 2320 B-97	Alkalinity	240	A	mg CaCO3/L	P249871	
	SM 2540 C-97	TDS	5.83E+03		mg/L	P249915	
	SM 2540 D-97	TSS	6	I	mg/L	P249935	
	SM 4500 F-C-97	Fluoride	0.22		mg F/L	P249873	
1485638	SM 5310 B-00 dissolved	Organic Carbon	32		mg C/L	P249861	
1485644	EPA 350.1 Rev. 2.0	Ammonia-N	0.017	I	mg N/L	P249765	MS
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.0		mg N/L	P249749	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P249786	
	EPA 365.1 Rev. 2.0	Total-P	0.080		mg P/L	P249742	
	SM 5310 B-00	Organic Carbon	32		mg C/L	P249860	
1485650	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.005	I	mg P/L	P249638	

Ref. Method and Comment:
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Sample Location: RQ-2013-01-21-26 SITE BR #78 TMT **Collection Date/Time: 02/20/2013 12:23 PM**

Field ID: SD022013-5 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1485631	EPA 180.1 Rev. 2.0	Turbidity	0.75		NTU	P249664	
	EPA 300.0 Rev. 2.1	Chloride	200		mg Cl/L	P249905	
		Sulfate	23		mg SO4/L	P249920	
	SM 2120 B	Color (true)	19		PCU	P249655	
	SM 2320 B-97	Alkalinity	239		mg CaCO3/L	P249790	
	SM 2540 C-97	TDS	576		mg/L	P249915	
	SM 2540 D-97	TSS	4	I	mg/L	P249935	
	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P249792	
1485637	SM 5310 B-00 dissolved	Organic Carbon	6.5		mg C/L	P249861	
1485643	EPA 350.1 Rev. 2.0	Ammonia-N	0.035		mg N/L	P249707	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.54		mg N/L	P249751	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.011		mg N/L	P249800	
	EPA 365.1 Rev. 2.0	Total-P	0.023		mg P/L	P249743	
	SM 5310 B-00	Organic Carbon	6.8		mg C/L	P249860	
1485649	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.008	I	mg P/L	P249637	

Ref. Method and Comment:
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.
EPA 351.2 Rev. 2.0: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

Quality Assurance Report
Method Blank Results

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P249663

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P249664

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P249905

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P249920

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P249707

Component	Result	Code	Units
Ammonia-N	0.010	U	mg N/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P249765

Component	Result	Code	Units
Ammonia-N	0.010	U	mg N/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P249768

Component	Result	Code	Units
Ammonia-N	0.010	U	mg N/L

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P249749

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P249751

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P249786

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P249799

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P249800

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P249742

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P249743

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P249636

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P249637

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P249638

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

Reference Method: SM 2120 B
Batch ID: P249655

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report
Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P249790

Component	Result	Code	Units
Alkalinity	0.65	U	mg CaCO3/L

Reference Method: SM 2320 B-97
Batch ID: P249871

Component	Result	Code	Units
Alkalinity	0.65	U	mg CaCO3/L

Reference Method: SM 2540 C-97
Batch ID: P249914

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P249915

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P249934

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P249935

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P249792

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P249873

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P249860

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

Quality Assurance Report
Method Blank Results

Reference Method: SM 5310 B-00
Batch ID: P249861

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

Reference Method: SM 5310 B-00 dissolved
Batch ID: P249861

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P249905

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P249920

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	96.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P249707

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P249765

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P249768

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P249749

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: P249751

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P249751

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	92.2		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P249786

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	97.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P249799

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P249800

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P249742

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P249743

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P249636

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P249637

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P249638

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P249790

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Alkalinity	96.1		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P249871

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Alkalinity	96.5		P	85 - 115

Reference Method: SM 4500 F-C-97
Batch ID: P249792

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	85 - 115

Reference Method: SM 4500 F-C-97
Batch ID: P249873

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.8		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P249860

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	100		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P249861

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

Reference Method: SM 5310 B-00 dissolved
Batch ID: P249861

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

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P249905

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1485472	Chloride	99.8	99.9	P/P	90 - 110
1485630	Chloride	100		P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P249920

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1485472	Sulfate	98.4	98.8	P/P	90 - 110
1485630	Sulfate	96.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P249707

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1485732	Ammonia-N	101	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P249765

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1485592	Ammonia-N	113	116	F/F	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P249768

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1485605	Ammonia-N	89.9	94.8	F/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P249749

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1485805	Kjeldahl Nitrogen	96.7	98.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P249786

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1485410	NO2NO3-N	95.8	96.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P249799

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1485640	NO2NO3-N	99.0	98.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P249800

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1485690	NO2NO3-N	95.0	96.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P249742

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1485805	Total-P	104	105	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P249743

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1485640	Total-P	104	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P249636

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1485508	O-Phosphate-P	94.5	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P249637

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1485646	O-Phosphate-P	92.4	96.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P249638

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1485343	O-Phosphate-P	99.6	97.4	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P249792

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1485482	Fluoride	101	101	P/P	85 - 115

Reference Method: SM 4500 F-C-97
Batch ID: P249873

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1485632	Fluoride	106	105	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P249860

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1485641	Organic Carbon	102	100	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P249861

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1485507	Organic Carbon	99.6	98.1	P/P	85 - 115

Reference Method: SM 5310 B-00 dissolved
Batch ID: P249861

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1485507	Organic Carbon	99.6	98.1	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P249663

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485551	Turbidity	1.84	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P249664

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485632	Turbidity	0.664	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P249905

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485472	Chloride	0.0574	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P249920

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485472	Sulfate	0.406	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P249707

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485732	Ammonia-N	1.12	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P249765

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485592	Ammonia-N	2.36	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P249768

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485605	Ammonia-N	4.04	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P249749

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485805	Kjeldahl Nitrogen	1.13	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P249751

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485639	Kjeldahl Nitrogen	4.85	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P249786

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485410	NO2NO3-N	0.447	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P249799

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485640	NO2NO3-N	0.746	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P249800

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485690	NO2NO3-N	1.57	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P249742

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485805	Total-P	0.713	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P249743

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485640	Total-P	2.57	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P249636

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485508	O-Phosphate-P	5.66	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P249637

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485646	O-Phosphate-P	3.55	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P249638

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485343	O-Phosphate-P	2.08	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P249655

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485675	Color (true)	6.30	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P249790

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485482	Alkalinity	0.0801	Sample	P	0 - 20
1485679	Alkalinity	0.836	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P249871

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485632	Alkalinity	0.000972	Sample	P	0 - 20

Reference Method: SM 2540 C-97
Batch ID: P249914

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485505	TDS	2.86	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P249915

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485630	TDS	5.52	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P249792

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485482	Fluoride	0.467	Spike	P	0 - 20

Reference Method: SM 4500 F-C-97
Batch ID: P249873

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485632	Fluoride	0.470	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: SM 5310 B-00
Batch ID: P249860

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485641	Organic Carbon	1.06	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P249861

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485507	Organic Carbon	0.872	Spike	P	0 - 20

Reference Method: SM 5310 B-00 dissolved
Batch ID: P249861

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1485507	Organic Carbon	0.872	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A49156
Included Lab Sample IDs: 1485645, 1485646, 1485647, 1485648, 1485649, 1485650

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	95.1	95.6	P/P	90 - 110
O-Phosphate-P	97.6	97.5	P/P	90 - 110
O-Phosphate-P	97.6	97.6	P/P	90 - 110
O-Phosphate-P	98.2	97.6	P/P	90 - 110

Reference Method: SM 2120 B
Run ID: A49163
Included Lab Sample IDs: 1485627, 1485628, 1485629, 1485630, 1485631, 1485632

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	97.4	94.5	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A49166
Included Lab Sample IDs: 1485627, 1485628, 1485629, 1485630, 1485631, 1485632

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	101	P/P	95 - 105
Turbidity	102	101	P/P	95 - 105

Quality Assurance Report
Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A49188
Included Lab Sample IDs: 1485639, 1485640, 1485641, 1485642, 1485643

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	105	106	P/P	90 - 110
Ammonia-N	106	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A49208
Included Lab Sample IDs: 1485639

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	99.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A49209
Included Lab Sample IDs: 1485640, 1485641, 1485642, 1485643, 1485644

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.5	97.0	P/P	90 - 110
Total-P	99.5	98.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A49211
Included Lab Sample IDs: 1485639, 1485640, 1485641, 1485642, 1485643, 1485644

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	105	P/P	90 - 110
Kjeldahl Nitrogen	105	99.4	P/P	90 - 110
Kjeldahl Nitrogen	94.4	96.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A49212
Included Lab Sample IDs: 1485644

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	97.8	95.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A49213
Included Lab Sample IDs: 1485639, 1485640, 1485641, 1485642, 1485643

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	101	P/P	90 - 110
NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A49220
Included Lab Sample IDs: 1485644

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	103	107	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A49222
Included Lab Sample IDs: 1485627, 1485628, 1485629, 1485630, 1485631, 1485632

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	100	P/P	90 - 110
Chloride	100	101	P/P	90 - 110
Sulfate	92.8	97.3	P/P	90 - 110
Sulfate	94.0	97.0	P/P	90 - 110
Sulfate	99.0	95.8	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A49226
Included Lab Sample IDs: 1485627, 1485628, 1485629, 1485630, 1485631

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Alkalinity	93.5	93.0	P/P	85 - 115
Alkalinity	94.5	93.5	P/P	85 - 115

Reference Method: SM 4500 F-C-97
Run ID: A49226
Included Lab Sample IDs: 1485627, 1485628, 1485629, 1485630, 1485631

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

Reference Method: SM 5310 B-00
Run ID: A49259
Included Lab Sample IDs: 1485639, 1485640, 1485641, 1485642, 1485643, 1485644

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.5	98.8	P/P	90 - 110
Organic Carbon	98.8	99.0	P/P	90 - 110

Reference Method: SM 5310 B-00 dissolved
Run ID: A49259
Included Lab Sample IDs: 1485633, 1485634, 1485635, 1485636, 1485637, 1485638

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.5	98.8	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A49263
Included Lab Sample IDs: 1485632

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Alkalinity	94.7	92.3	P/P	85 - 115

Reference Method: SM 4500 F-C-97
Run ID: A49263
Included Lab Sample IDs: 1485632

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	99.1	P/P	90 - 110

Quality Assurance Report
Calibration Verification

* 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		
						LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						1.84	
	Turbidity						0.664	
EPA 300.0 Rev. 2.1	Chloride	99.1	99.8	99.9	100			0.0574
	Sulfate	96.5	98.4	98.8	96.3			0.406
EPA 350.1 Rev. 2.0	Ammonia-N	104	101	102				1.12
	Ammonia-N	101	113	116				2.36
	Ammonia-N	103	89.9	94.8				4.04
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	96.7	98.2				1.13
	Kjeldahl Nitrogen	92.2						4.85
EPA 353.2 Rev. 2.0	NO2NO3-N	97.0	95.8	96.2				0.447
	NO2NO3-N	99.5	99.0	98.0				0.746
	NO2NO3-N	98.5	95.0	96.5				1.57
EPA 365.1 Rev. 2.0	Total-P	105	104	105				0.713
	Total-P	107	104	106				2.57
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.6	94.5	100				5.66
	O-Phosphate-P	103	92.4	96.5				3.55
	O-Phosphate-P	101	99.6	97.4				2.08
SM 2120 B	Color (true)						6.30	
SM 2320 B-97	Alkalinity	96.1					0.0801 0.836	
	Alkalinity	96.5					0.0009	
SM 2540 C-97	TDS						2.86	
	TDS						5.52	
SM 4500 F-C-97	Fluoride	101	101	101				0.467
	Fluoride	97.8	106	105				0.470
SM 5310 B-00	Organic Carbon	100	102	100				1.06
	Organic Carbon	97.8	99.6	98.1				0.872
SM 5310 B-00 dissolved	Organic Carbon	97.8	99.6	98.1				0.872

Reference Method Descriptions

Method / NELAC Cert. #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1485627, 1485628, 1485629, 1485630, 1485631, 1485632
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1485627, 1485628, 1485629, 1485630, 1485631, 1485632
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1485627, 1485628, 1485629, 1485630, 1485631, 1485632
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1485639, 1485640, 1485641, 1485642, 1485643, 1485644
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1485639, 1485640, 1485641, 1485642, 1485643, 1485644
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1485639, 1485640, 1485641, 1485642, 1485643, 1485644
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1485639, 1485640, 1485641, 1485642, 1485643, 1485644

Reference Method Descriptions

Method / NELAC Cert. #	Description	Associated Samples
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1485645, 1485646, 1485647, 1485648, 1485649, 1485650
SM 2120 B / E31780	True Color measured at 450 nm or Apparent Color	1485627, 1485628, 1485629, 1485630, 1485631, 1485632
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1485627, 1485628, 1485629, 1485630, 1485631, 1485632
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1485627, 1485628, 1485629, 1485630, 1485631, 1485632
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1485627, 1485628, 1485629, 1485630, 1485631, 1485632
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1485627, 1485628, 1485629, 1485630, 1485631, 1485632
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1485639, 1485640, 1485641, 1485642, 1485643, 1485644
SM 5310 B-00 dissolved / E31780	Dissolved Nonpurgeable Organic Carbon in filtered, aqueous matrices	1485633, 1485634, 1485635, 1485636, 1485637, 1485638

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	02/21/2013			02/21/2013 17:02	Blanca Fach	1485627, 1485628, 1485629, 1485630, 1485631, 1485632
EPA 300.0 Rev. 2.1	02/21/2013			02/27/2013	Gary Dearman	1485627, 1485628, 1485629, 1485630, 1485631, 1485632
	02/21/2013			02/28/2013	Gary Dearman	1485627
EPA 350.1 Rev. 2.0	02/21/2013			02/22/2013	Diana M. Turner	1485639, 1485640, 1485641, 1485642, 1485643
	02/21/2013			02/26/2013	Diana M. Turner	1485644
EPA 351.2 Rev. 2.0	02/21/2013	02/25/2013	Christopher Armour	02/26/2013	Bryan A. Werth	1485639, 1485640, 1485641, 1485642, 1485643, 1485644
EPA 353.2 Rev. 2.0	02/21/2013			02/25/2013	Sima Feizi	1485644
	02/21/2013			02/26/2013	Sima Feizi	1485639, 1485640, 1485641, 1485642, 1485643
EPA 365.1 Rev. 2.0	02/21/2013	02/25/2013	Christopher Armour	02/26/2013	Pallavi R. Gadwal	1485640, 1485641, 1485642, 1485643, 1485644
	02/21/2013	02/25/2013	Christopher Armour	02/26/2013	Peter D. Kaus	1485639
EPA 365.1 Rev. 2.0 dissolved	02/21/2013			02/21/2013 14:24	Bryan A. Werth	1485646
	02/21/2013			02/21/2013 14:50	Bryan A. Werth	1485645
	02/21/2013			02/21/2013 14:54	Bryan A. Werth	1485647
	02/21/2013			02/21/2013 14:55	Bryan A. Werth	1485648
	02/21/2013			02/21/2013 14:56	Bryan A. Werth	1485649
	02/21/2013			02/21/2013 15:12	Bryan A. Werth	1485650
SM 2120 B	02/21/2013			02/21/2013 15:34	Rochelle Y Jackson	1485627
	02/21/2013			02/21/2013 15:35	Rochelle Y Jackson	1485628
	02/21/2013			02/21/2013 15:36	Rochelle Y Jackson	1485629
	02/21/2013			02/21/2013 15:37	Rochelle Y Jackson	1485630
	02/21/2013			02/21/2013 15:38	Rochelle Y Jackson	1485631
	02/21/2013			02/21/2013 15:39	Rochelle Y Jackson	1485632
SM 2320 B-97	02/21/2013			02/26/2013	Dale L. Simmons	1485627, 1485628, 1485629, 1485630, 1485631
	02/21/2013			02/28/2013	Dale L. Simmons	1485632
SM 2540 C-97	02/21/2013			02/26/2013	Yijie Li	1485627, 1485628, 1485629, 1485630, 1485631, 1485632
SM 2540 D-97	02/21/2013			02/26/2013	Yijie Li	1485627, 1485628, 1485629, 1485630, 1485631, 1485632
SM 4500 F-C-97	02/21/2013			02/26/2013	Dale L. Simmons	1485627, 1485628, 1485629, 1485630, 1485631
	02/21/2013			02/28/2013	Dale L. Simmons	1485632
SM 5310 B-00	02/21/2013			02/28/2013	Rochelle Y Jackson	1485639, 1485640
	02/21/2013			03/01/2013	Rochelle Y Jackson	1485641, 1485642, 1485643, 1485644
SM 5310 B-00 dissolved	02/21/2013			02/28/2013	Rochelle Y Jackson	1485633, 1485634, 1485635, 1485636, 1485637, 1485638