

Chemical Analysis Report

NW-DIST-2010-02-23-01

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

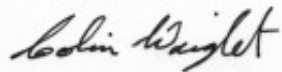
Event Description: **Project Greenshores**
Request ID: **RQ-2010-02-22-20**
Customer: **NW-DIST**
Project ID: **DISCRTNARY**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 308
Pensacola, FL 32502-5794
Attn: Cheryl Bunch

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

Certified by: Colin Wright, Environmental Manager

Date Certified: 11-MAR-2010 17:40



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.

RSD – Relative Standard Deviation expressed as a percentage.

SMP – Sample.

* - Item was outside the QC Limits.

** - 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).

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: 1/2 MUSCOGEE AND HAWKSHAW

Collection Date/Time: 02/22/2010 12:20 PM

Field ID: 6

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1251236	EPA 180.1 Rev. 2.0	Turbidity	9.2			NTU	E31780
	SM 2120 B-01	Color (apparent)	80			PCU	
	SM 2540 D-97	TSS	7	I		mg/L	
1251250	EPA 350.1 Rev. 2.0	Ammonia-N	0.011	I		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.28			mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14			mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.022			mg P/L	

Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 6 units. This value does not represent the field pH.

SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

Sample Location: 1/2 BRIDGE AND MUSCOGEE

Collection Date/Time: 02/22/2010 11:01 AM

Field ID: 2

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1251232	EPA 180.1 Rev. 2.0	Turbidity	10			NTU	E31780
	SM 2120 B-01	Color (apparent)	80			PCU	
	SM 2540 D-97	TSS	6	I		mg/L	
1251246	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.25			mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14			mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.012			mg P/L	

Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 6 units. This value does not represent the field pH.

SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

EPA 351.2 Rev. 2.0 Matrix spike recovery data is unavailable due to the large amount of analyte in the QC sample.

Sample Location: 1/2 BRIDGE AND PORT

Collection Date/Time: 02/22/2010 11:23 AM

Field ID: 7

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1251237	EPA 180.1 Rev. 2.0	Turbidity	9.8	A		NTU	E31780
	SM 2120 B-01	Color (apparent)	80			PCU	
	SM 2540 D-97	TSS	5	I		mg/L	
1251251	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.32			mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14			mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.015			mg P/L	

Field ID: 7

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
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Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 6 units. This value does not represent the field pH.

SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

Sample Location: 1/4 BETWEEN BRIDGE & PORT

Collection Date/Time: 02/22/2010 11:28 AM

Field ID: 12

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
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1251242	EPA 180.1 Rev. 2.0	Turbidity	9.8			NTU	E31780
	SM 2120 B-01	Color (apparent)	80			PCU	
	SM 2540 D-97	TSS	7	I		mg/L	
1251256	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.27			mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14			mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.016			mg P/L	

Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 6 units. This value does not represent the field pH.

SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

Sample Location: 100 FT. SOUTH OF STORM DRAIN

Collection Date/Time: 02/22/2010 11:10 AM

Field ID: 4

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
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1251234	EPA 180.1 Rev. 2.0	Turbidity	9.5			NTU	E31780
	SM 2120 B-01	Color (apparent)	80	A		PCU	
	SM 2540 D-97	TSS	6	I		mg/L	
1251248	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.32	I		mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14			mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.024	A		mg P/L	

Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 6 A units. This value does not represent the field pH.

SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

Sample Location: BETWEEN MARINA AND OUTFALL

Collection Date/Time: 02/22/2010 11:40 AM

Field ID: 10

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
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1251240	EPA 180.1 Rev. 2.0	Turbidity	9.6			NTU	E31780
	SM 2120 B-01	Color (apparent)	60			PCU	
	SM 2540 D-97	TSS	7	I		mg/L	
1251254	EPA 350.1 Rev. 2.0	Ammonia-N	0.045			mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.35			mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.17			mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.026			mg P/L	

Field ID: 10

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
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Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 6 units. This value does not represent the field pH.

SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

Sample Location: EAST OF PRIMULK STORM DRAIN**Collection Date/Time: 02/22/2010 11:06 AM****Field ID: 3**

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
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1251233	EPA 180.1 Rev. 2.0	Turbidity	9.6			NTU	E31780
	SM 2120 B-01	Color (apparent)	80			PCU	
	SM 2540 D-97	TSS	9	I		mg/L	
1251247	EPA 350.1 Rev. 2.0	Ammonia-N	0.012	I		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.24			mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14			mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.015			mg P/L	

Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 6 units. This value does not represent the field pH.

SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

EPA 351.2 Rev. 2.0 Matrix spike recovery data is unavailable due to the large amount of analyte in the QC sample.

Sample Location: EAST OF STORMDRAIN INSIDE PGS2**Collection Date/Time: 02/22/2010 12:08 PM****Field ID: 14**

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
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1251244	EPA 180.1 Rev. 2.0	Turbidity	13			NTU	E31780
	SM 2120 B-01	Color (apparent)	60			PCU	
	SM 2540 D-97	TSS	8	I		mg/L	
1251258	EPA 350.1 Rev. 2.0	Ammonia-N	0.061			mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.35			mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.18			mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.045			mg P/L	

Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 6 units. This value does not represent the field pH.

SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

Sample Location: END OF CHASE STREET**Collection Date/Time: 02/22/2010 11:19 AM****Field ID: 5**

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
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1251235	EPA 180.1 Rev. 2.0	Turbidity	9.8			NTU	E31780
	SM 2120 B-01	Color (apparent)	80			PCU	
	SM 2540 D-97	TSS	7	I		mg/L	
1251249	EPA 350.1 Rev. 2.0	Ammonia-N	0.014	I		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.31			mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14			mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.020			mg P/L	

Field ID: 5

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
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Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 6 units. This value does not represent the field pH.

SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

EPA 351.2 Rev. 2.0 Matrix spike recovery data is unavailable due to the large amount of analyte in the QC sample.

Sample Location: ENTRANCE OF MARINA

Collection Date/Time: 02/22/2010 11:35 AM

Field ID: 11

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
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1251241	EPA 180.1 Rev. 2.0	Turbidity	13			NTU	E31780
	SM 2120 B-01	Color (apparent)	50	A		PCU	
	SM 2540 D-97	TSS	11	I		mg/L	
1251255	EPA 350.1 Rev. 2.0	Ammonia-N	0.070			mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.41			mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.43			mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.055			mg P/L	

Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 6 A units. This value does not represent the field pH.

SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

Sample Location: INSIDE HAWKSHAW LAGOON

Collection Date/Time: 02/22/2010 12:00 PM

Field ID: 13

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
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1251243	EPA 180.1 Rev. 2.0	Turbidity	8.7			NTU	E31780
	SM 2120 B-01	Color (apparent)	60			PCU	
	SM 2540 D-97	TSS	13	I		mg/L	
1251257	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.44			mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.005	I		mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.031			mg P/L	

Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 6 units. This value does not represent the field pH.

SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

Sample Location: RANGE MARKER E OF TEXAR

Collection Date/Time: 02/22/2010 10:50 AM

Field ID: 1

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
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1251231	EPA 180.1 Rev. 2.0	Turbidity	12			NTU	E31780
	SM 2120 B-01	Color (apparent)	100			PCU	
	SM 2540 D-97	TSS	8	I		mg/L	
1251245	EPA 350.1 Rev. 2.0	Ammonia-N	0.011	I		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.26			mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.15			mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.017			mg P/L	

Field ID: 1

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
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Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 6 units. This value does not represent the field pH.

SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

EPA 351.2 Rev. 2.0 Matrix spike recovery data is unavailable due to the large amount of analyte in the QC sample.

Sample Location: WEST END OF HAWKSHAW

Collection Date/Time: 02/22/2010 11:48 AM

Field ID: 9

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1251239	EPA 180.1 Rev. 2.0	Turbidity	9.8			NTU	E31780
	SM 2120 B-01	Color (apparent)	60			PCU	
	SM 2540 D-97	TSS	9	I		mg/L	
1251253	EPA 350.1 Rev. 2.0	Ammonia-N	0.012	I		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.34			mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14			mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.027	A		mg P/L	

Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 6 units. This value does not represent the field pH.

SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

Sample Location: WEST OF STORM DRAIN INSIDE ROCKS

Collection Date/Time: 02/22/2010 11:15 AM

Field ID: 8

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1251238	EPA 180.1 Rev. 2.0	Turbidity	9.3			NTU	E31780
	SM 2120 B-01	Color (apparent)	60			PCU	
	SM 2540 D-97	TSS	5	I		mg/L	
1251252	EPA 350.1 Rev. 2.0	Ammonia-N	0.023			mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.41			mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14			mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.032			mg P/L	

Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 6 units. This value does not represent the field pH.

SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

Quality Control Report

Ref. Method	Analyte	LCS %Recovery	MS %Recovery	LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				0.559	
	Turbidity				0.717	
EPA 350.1 Rev. 2.0	Ammonia-N	99.2	104 98.8			3.11
	Ammonia-N	97.9	98.1 99.6			1.40
	Ammonia-N	98.2	100 106			5.23
SM 2120 B-01	Color (apparent)				0.0	
	Color (apparent)				0.0	
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105				8.52
EPA 365.1 Rev. 2.0	Total-P	95.3	106 99.0			5.21
	Total-P	98.5	93.5 94.7		3.31	
	Total-P	96.1	97.8 99.2		2.32	
	Total-P	95.4	98.0 98.0		3.35	
EPA 353.2 Rev. 2.0	NO2NO3-N	97.5	93.5 93.0			0.297
	NO2NO3-N	97.5	93.5 94.0			0.307
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	109	102 97.6			2.27
	Kjeldahl Nitrogen	98.6	108 108			0.659

Reference Method Descriptions

Ref. Method:

EPA 180.1 Rev. 2.0
EPA 350.1 Rev. 2.0
EPA 351.2 Rev. 2.0
EPA 353.2 Rev. 2.0
EPA 365.1 Rev. 2.0
SM 2120 B-01
SM 2540 D-97

Description

Turbidity in aqueous matrices
Ammonia in aqueous matrices as mg N/L
Total Kjeldahl Nitrogen in aqueous matrices
Nitrite/Nitrate in aqueous matrices as mg N/L
Low Level Total Phosphorus in fresh water matrices
Apparent color in water samples
Total Suspended Solids in aqueous matrices

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	2/23/2010			02/23/2010 15:33	Blanca Fach	1251231, 1251232, 1251233, 1251234, 1251235, 1251236, 1251237, 1251238, 1251239, 1251240, 1251241, 1251242, 1251243, 1251244
EPA 350.1 Rev. 2.0	2/23/2010			02/24/2010	Peter D. Kaus	1251245, 1251246, 1251247, 1251248, 1251249, 1251250, 1251251, 1251252, 1251253, 1251254, 1251255, 1251256, 1251257, 1251258
EPA 351.2 Rev. 2.0	2/23/2010	02/24/2010	Bryan A. Werth	02/25/2010	Christopher Armour	1251245, 1251246, 1251247, 1251249
EPA 351.2 Rev. 2.0	2/23/2010	03/01/2010	Bryan A. Werth	03/02/2010	Virginia P. Bryant	1251250, 1251251, 1251252, 1251253, 1251254, 1251255, 1251256, 1251257, 1251258
EPA 351.2 Rev. 2.0	2/23/2010	03/01/2010	Bryan A. Werth	03/03/2010	Christopher Armour	1251248
EPA 353.2 Rev. 2.0	2/23/2010			02/26/2010	Sima Feizi	1251245, 1251246, 1251247, 1251248, 1251249, 1251250, 1251251, 1251252, 1251253, 1251254, 1251255, 1251256, 1251257, 1251258
EPA 365.1 Rev. 2.0	2/23/2010	02/24/2010	Megan E. Faircloth	02/27/2010	Megan E. Faircloth	1251248
EPA 365.1 Rev. 2.0	2/23/2010	02/25/2010	Megan E. Faircloth	02/26/2010	Thomas D. Graham	1251255
EPA 365.1 Rev. 2.0	2/23/2010	02/25/2010	Megan E. Faircloth	02/27/2010	Megan E. Faircloth	1251245, 1251246, 1251247, 1251249, 1251250, 1251251, 1251252, 1251253, 1251254, 1251256, 1251257, 1251258
SM 2120 B-01	2/23/2010			02/23/2010 15:45	Rochelle Y Jackson	1251231, 1251232, 1251233, 1251234, 1251235, 1251236, 1251237, 1251238, 1251239, 1251240, 1251241, 1251242, 1251243, 1251244
SM 2540 D-97	2/23/2010			02/24/2010	Yijie Li	1251231, 1251232, 1251233, 1251234, 1251235, 1251236, 1251237, 1251238, 1251239, 1251240, 1251241, 1251242, 1251243, 1251244