



Test Monitoring Center

6555 Penn Avenue
Pittsburgh, PA 15206-4489
(412) 365-1000

MEMORANDUM: 05-024

DATE: April 27 , 2005

TO Claire Whitton, Chairman, OSCT Surveillance Panel

FROM: Donald Lind

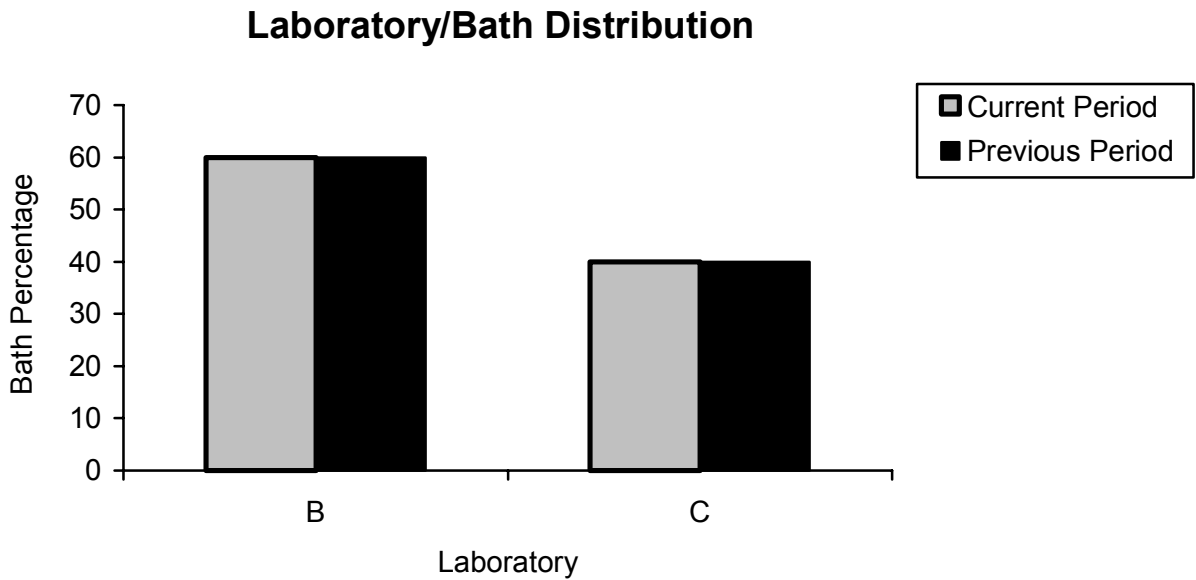
SUBJECT: OSCT Reference Test Status from October 1, 2004 through March 31, 2005

A total of 66 OSCT reference oil results from 2 laboratories were reported during the period October 1, 2004 through March 31, 2005.

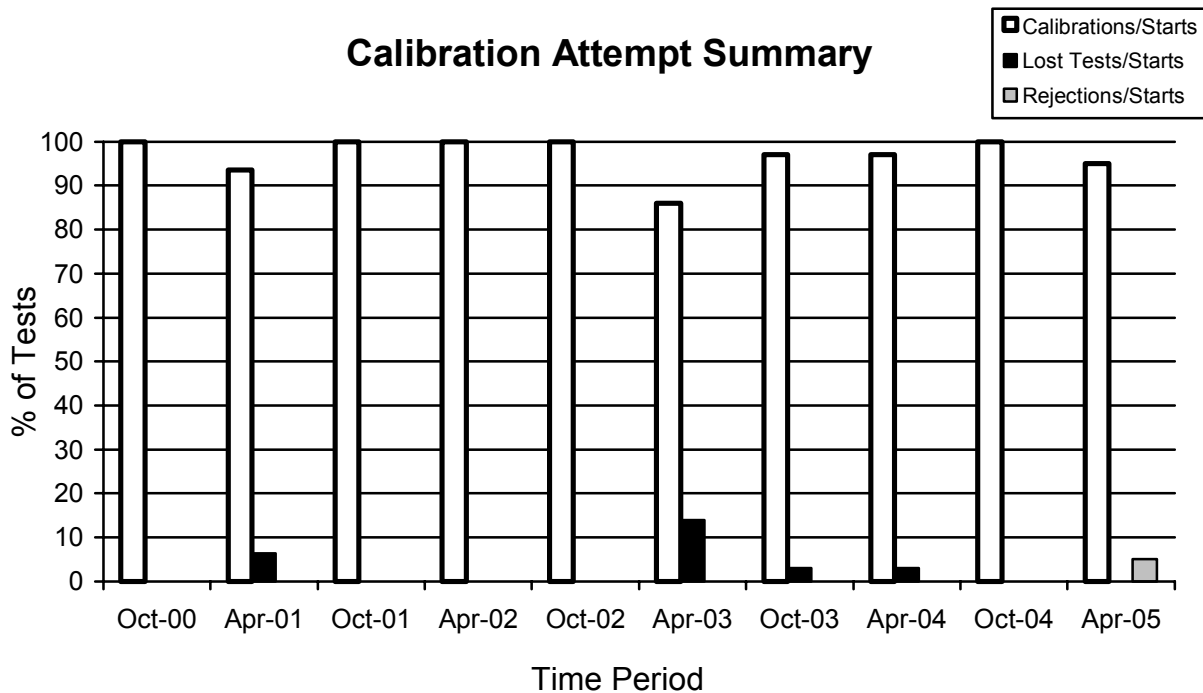
The following table summarizes the status of the reference oil test results reported to the TMC this report period:

Elastomer Type		TMC Validity	No. of Test Oil Results
Fluoroelastomer	Operationally and Statistically Acceptable	AC	24
	Statistically Unacceptable	OC	2
	Operationally Invalid	LC	0
	Aborted	XC	0
	Information Only	NN	0
Polyacrylate	Operationally and Statistically Acceptable	AC	19
	Statistically Unacceptable	OC	1
	Operationally Invalid	LC	0
	Aborted	XC	0
	Information Only	NN	0
Nitrile	Operationally and Statistically Acceptable	AC	20
	Statistically Unacceptable	OC	0
	Operationally Invalid	LC	0
	Aborted	XC	0
	Information Only	NN	0
	TOTAL		66

The following chart shows the laboratory bath distribution for data reported during this report period:



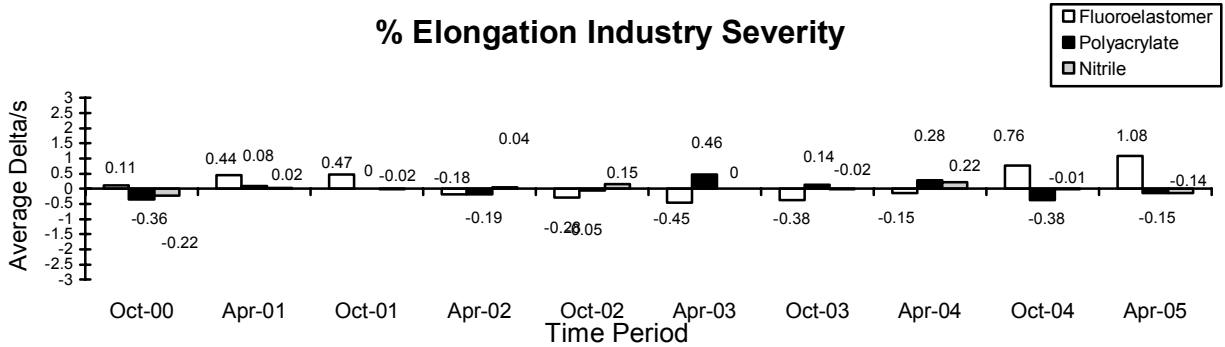
Attempted calibration tests are depicted graphically below by report period:



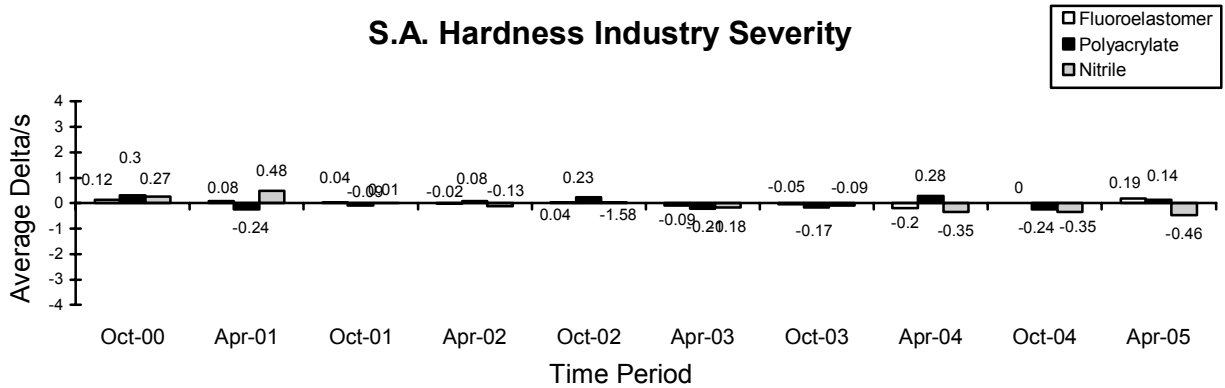
The calibration per start rate has decreased, the lost test per start rate remained the same, and the rejected per start rate has increased when compared to the last report period. All of the rejections were from the same lab.

INDUSTRY TEST SEVERITY

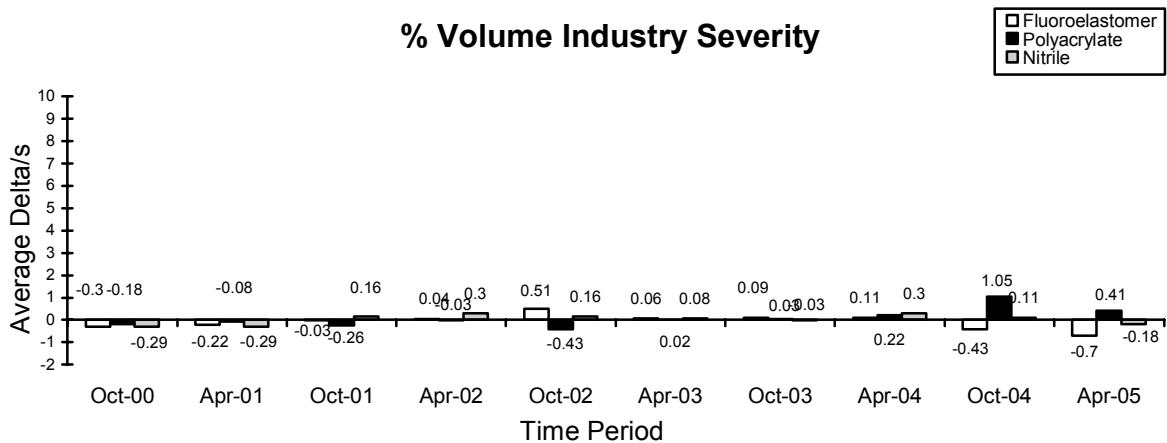
Percent elongation industry mean delta/s bar charts for the last ten report periods, for each elastomer material are shown below. Percent elongation for the fluoroelastomer material trended mild, the polyacrylate material and the nitrile material trended slightly severe.



S.A. hardness industry mean delta/s bar charts for the last ten report periods, for each elastomer material are shown below. S.A. hardness for the fluoroelastomer and polyacrylate materials trended slightly mild and the nitrile material trended severe for this period

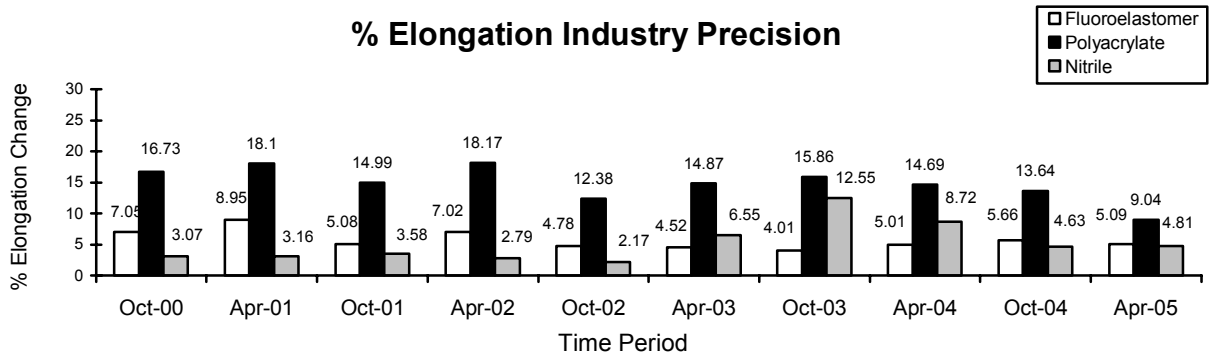


Percent volume industry mean delta/s bar charts for the last ten report periods, for each elastomer material are shown below. Percent volume for the fluoroelastomer material trended severe, the polyacrylate material trended mild, and the nitrile material was slightly severe of target for this period.

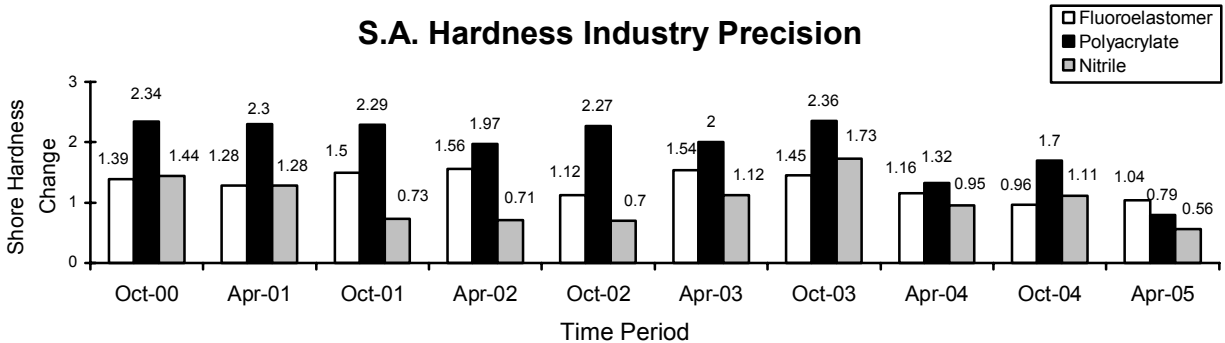


INDUSTRY TEST PRECISION

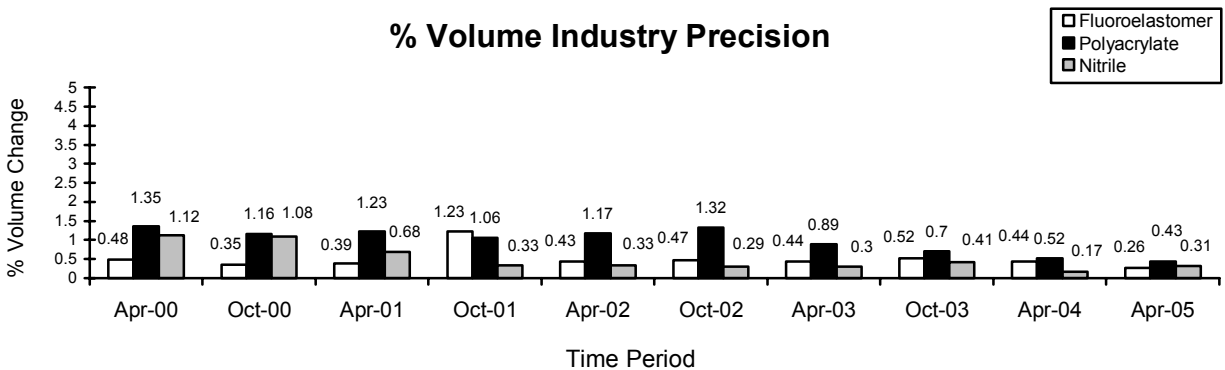
Percent elongation industry precision estimates for elastomer material, for the last ten report periods are shown below. Precision for polyacrylate and fluoroelastomer has improved with respect to the previous period. Precision for nitrile has degraded slightly with respect to the previous period. Precision for all three elastomers compares well with historical levels.



Shore hardness industry precision estimates for elastomer material, for the last ten report periods are shown below. Precision for the fluoroelastomer elastomer has degraded slightly with respect to the previous period. Precision for polyacrylate and nitrile elastomers has improved with respect to the previous period. Precision for all three elastomers compares well with respect to historical levels.



Percent volume industry precision estimates for elastomer materials, for the last ten report periods are shown below. Precision for polyacrylate and fluoroelastomer elastomers have improved slightly with respect to the previous period. Precision for the nitrile elastomer has degraded slightly with respect to the previous period. Precision for all three elastomers compares well with respect to historical levels.



INDUSTRY CONTROL CHARTS

Figures 1 through 3 are industry control charts for elongation change, shore hardness change, and percent volume change, respectively. Figures 4 through 6 are industry control charts of the last 100 test results for elongation change, shore hardness change, and percent volume change, respectively. Severity and precision EWMA charts for percent volume change and shore hardness change were in control this period. Elongation change triggered four EWMA severity warning alarms, two EWMA severity action alarms, and no precision EWMA alarms. The severity EWMA alarms do not appear to be related to any one lab, oil, or elastomer material.

REFERENCE OILS

The following table quantifies each reference oil by the number of reference oil containers remaining at the TMC and each laboratory. Each reference oil container has 750 ml (0.2 gallons) of oil.

LAB	160-1	161-1	162
B	8	9	2
C	11	12	3
TMC	712	199	0

INFORMATION LETTERS

There were no information letters issued during this report period.

TMC LAB VISITS

There were two lab visits conducted this report period. During the lab visit two discrepancies were noted. The discrepancies are listed below:

1. Elastomers were not being stored at the specified temperatures as outlined in Section 7.4.1.
2. Laboratory was not using the correct ratio of aerosol OT for the wetting solution as outlined in Section 7.6.

DML/dml

Attachments

c: OSCT Surveillance Panel

J. L. Zalar, TMC

F. M. Farber, TMC

<ftp://ftp.astmtmc.cmu.edu/docs/gear/osct/semiannualreports/osct-04-2005.pdf>

Distribution: Email

Figure 1

OSCT INDUSTRY OPERATIONALLY VALID DATA

REFERENCE ELONGATION CHANGE OVERALL

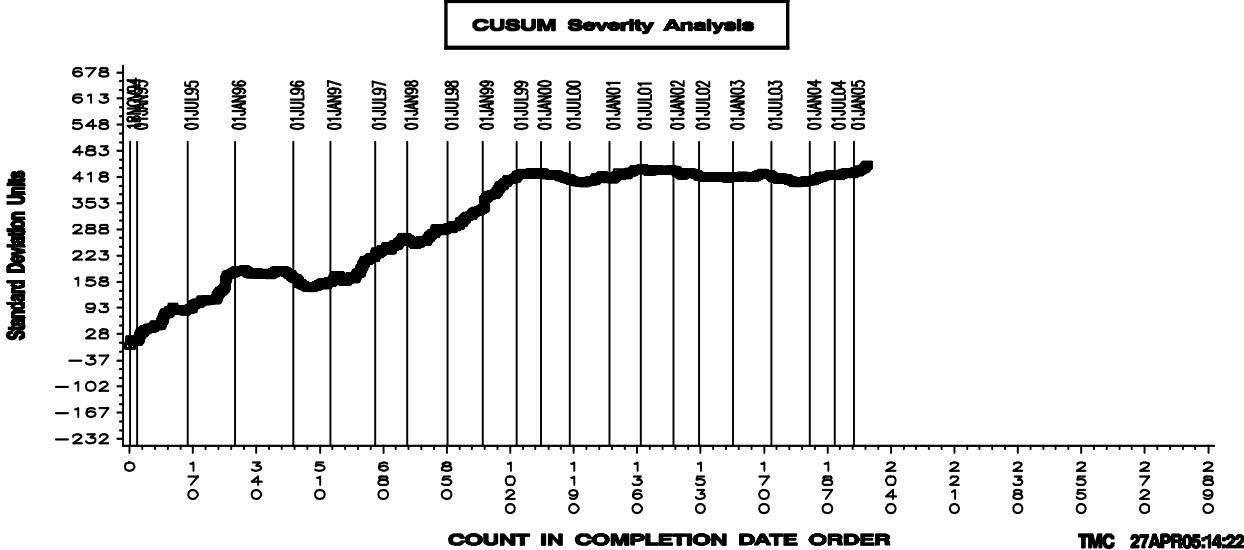
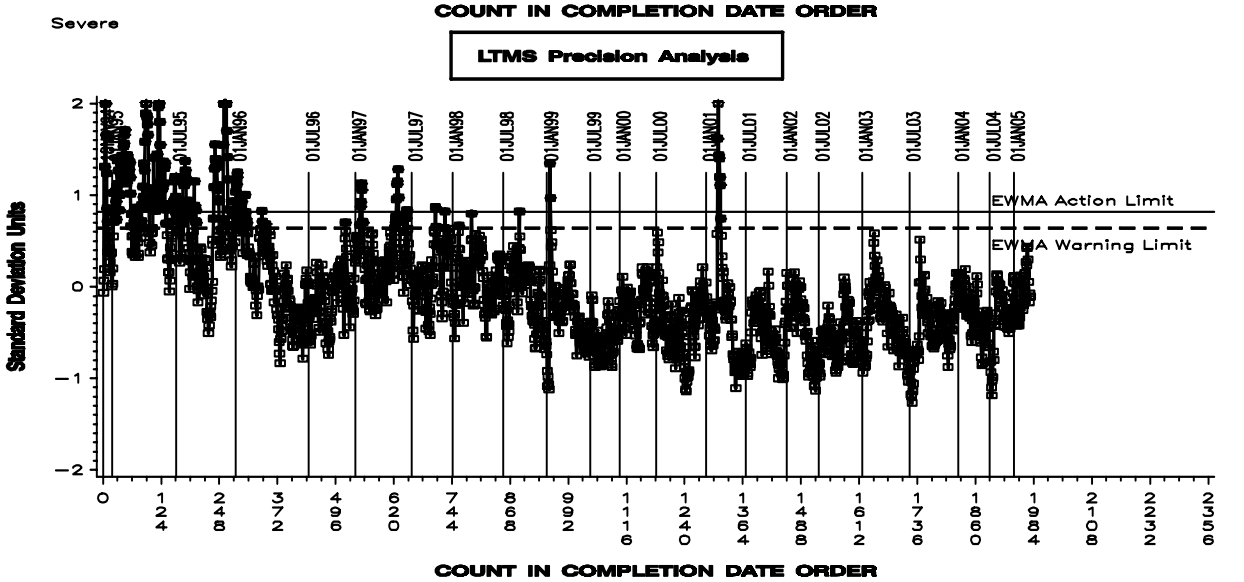
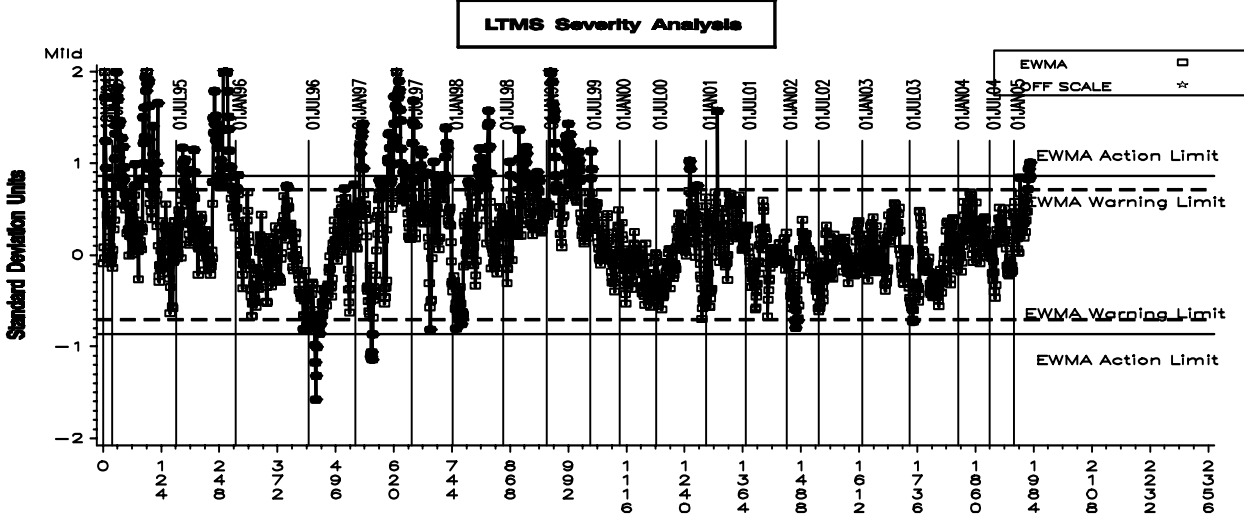
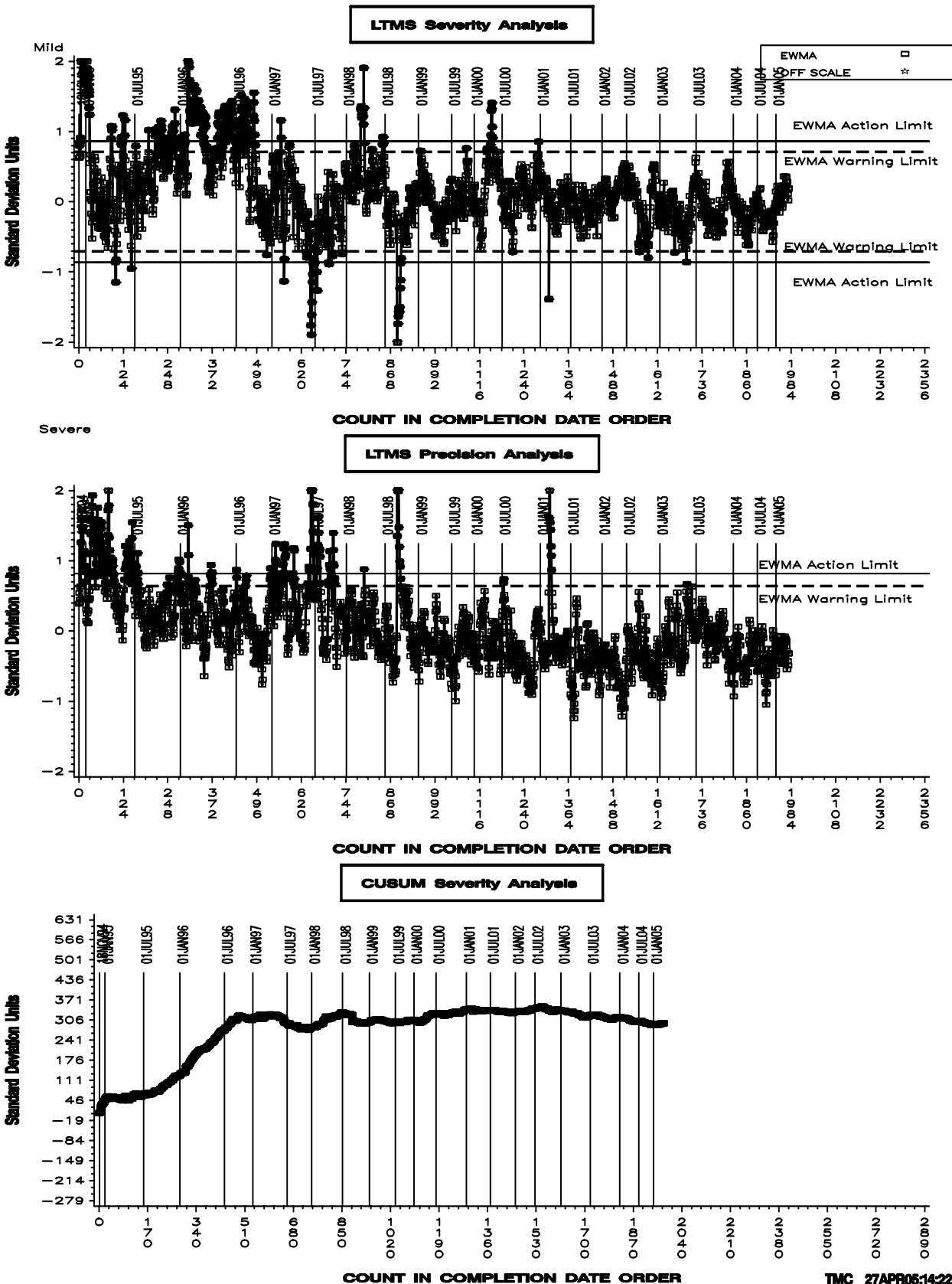


Figure 2

OSCT INDUSTRY OPERATIONALLY VALID DATA

REFERENCE SHORE A HARDNESS CHANGE OVERAL



OSCT INDUSTRY OPERATIONALLY VALID DATA

REFERENCE PERCENT VOLUME CHANGE OVERALL

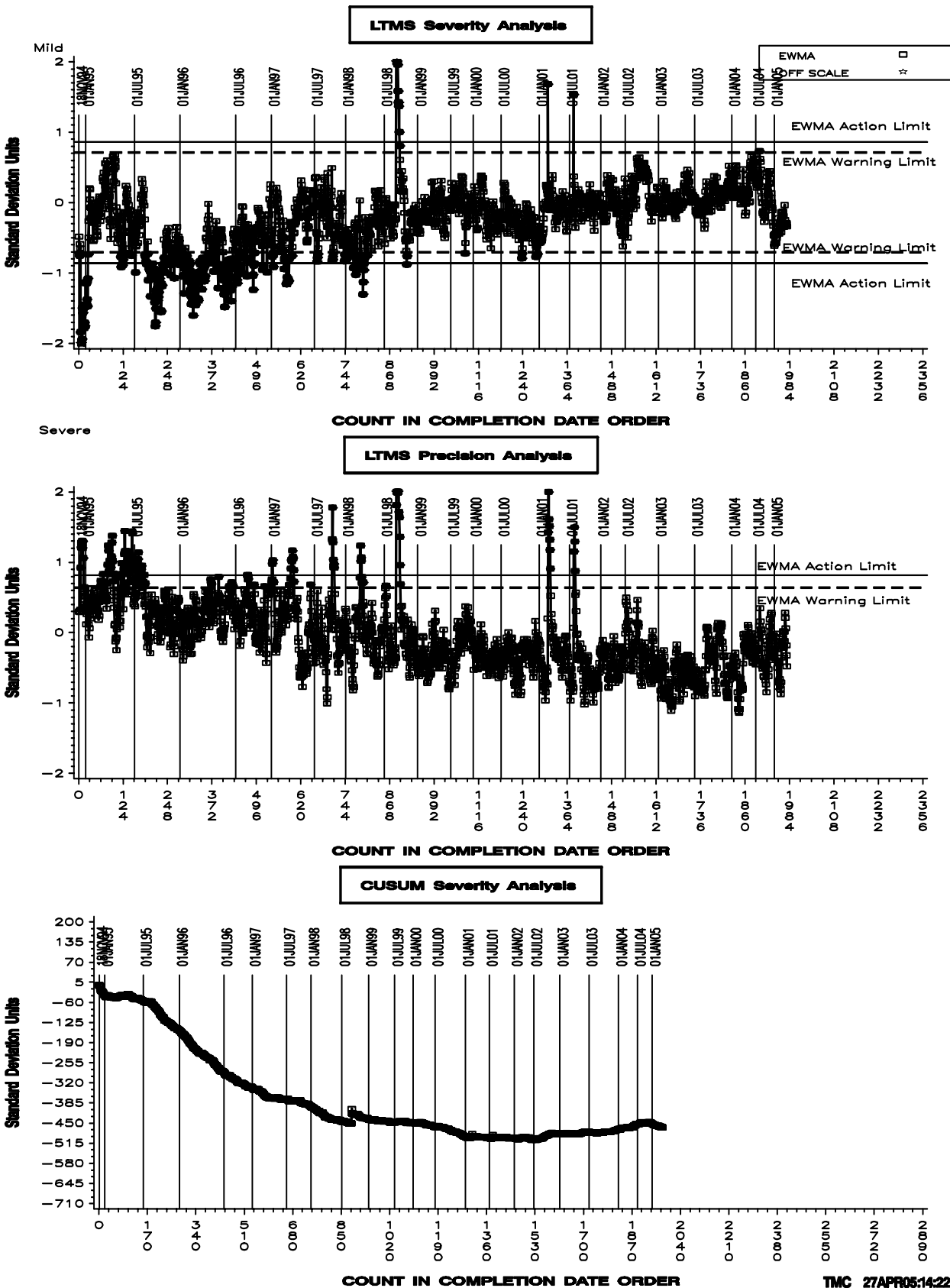


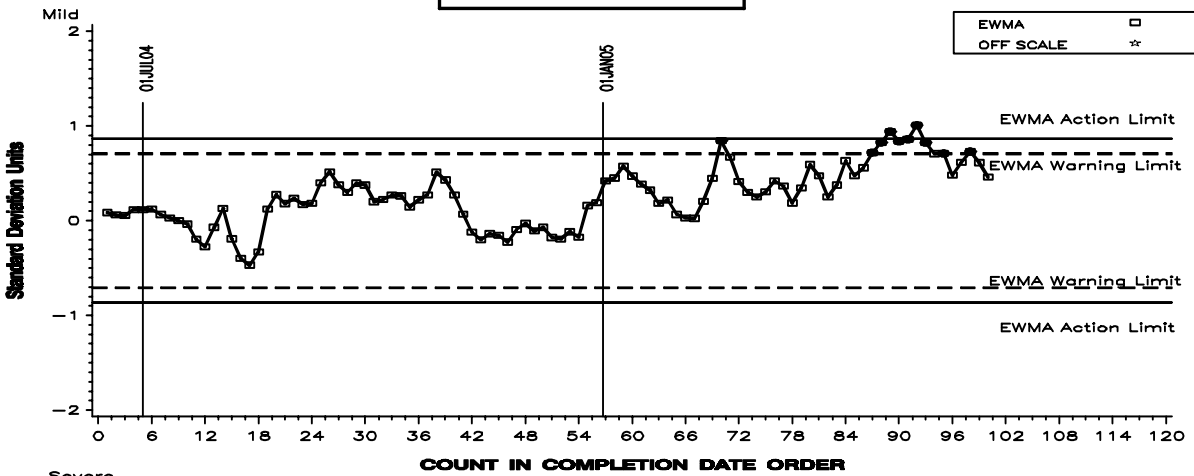
Figure 4

OSCT INDUSTRY OPERATIONALLY VALID DATA

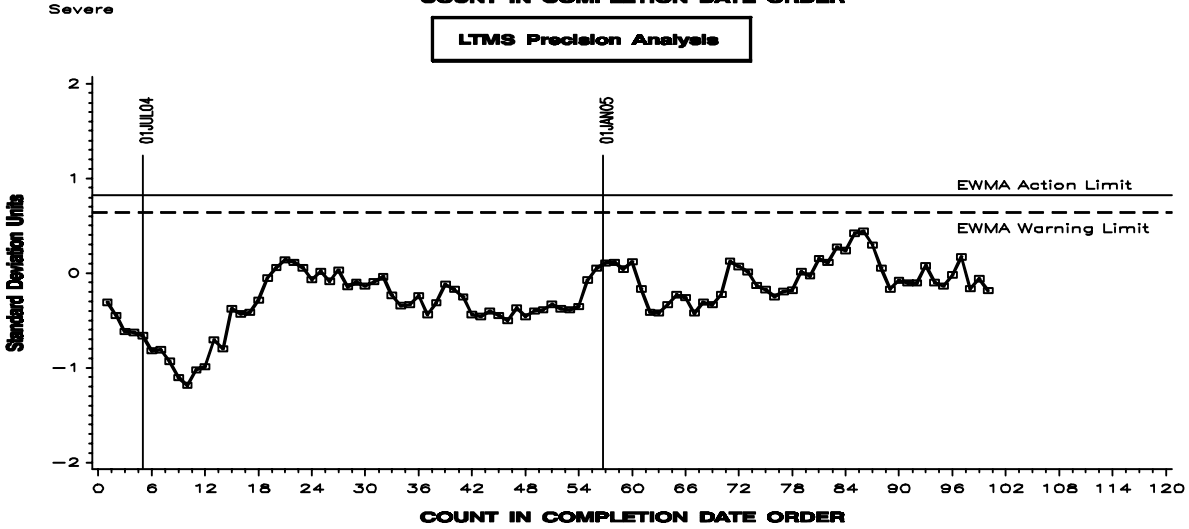
Last 100 Test Results

REFERENCE ELONGATION CHANGE OVERALL

LTMS Severity Analysis



LTMS Precision Analysis



CUSUM Severity Analysis

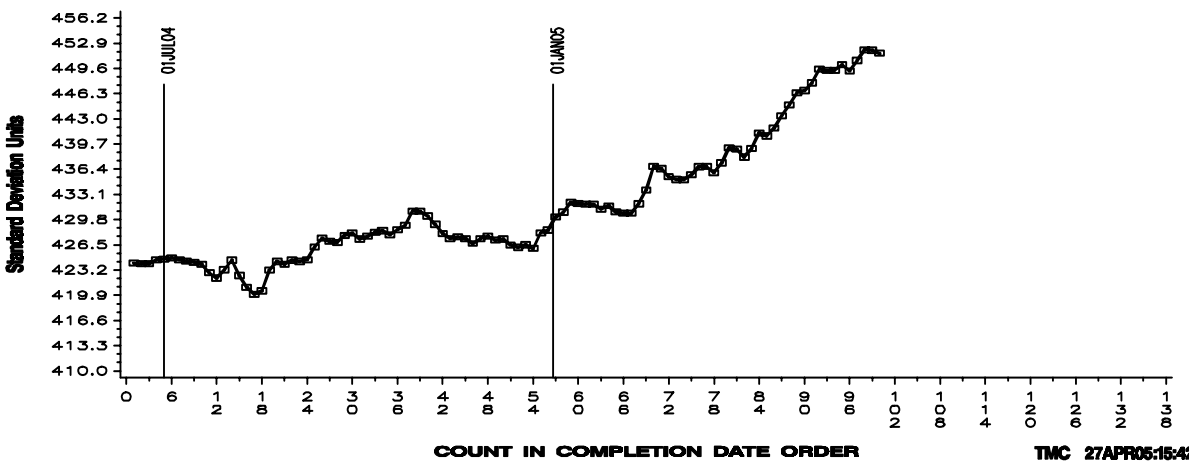


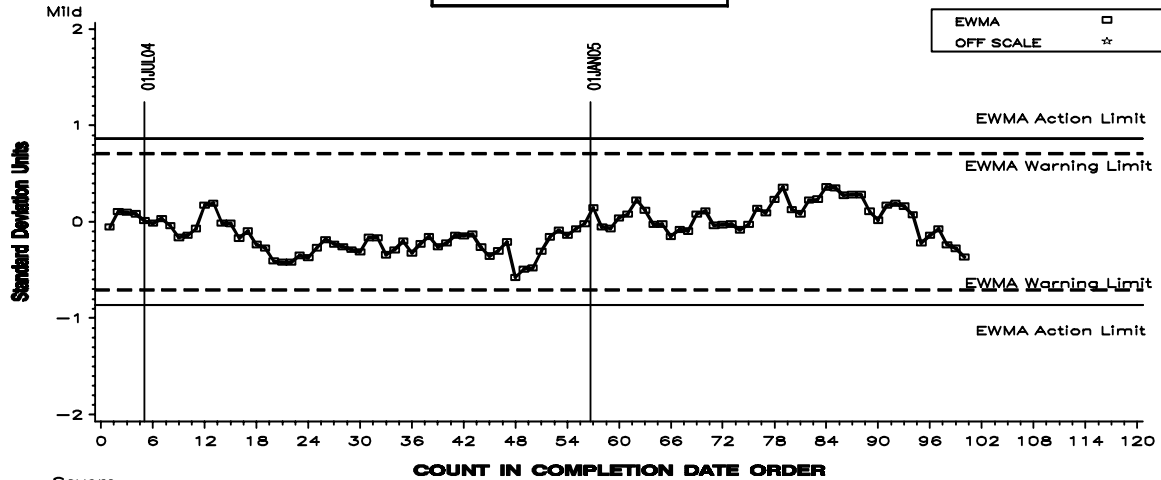
Figure 5

OSCT INDUSTRY OPERATIONALLY VALID DATA

Last 100 Test Results

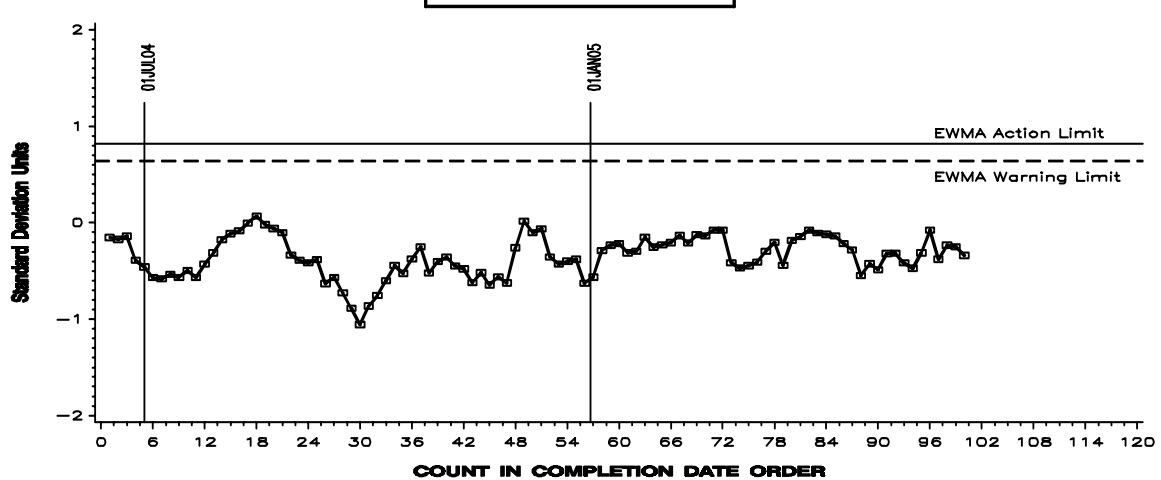
REFERENCE SHORE A HARDNESS CHANGE OVERAL

LTMS Severity Analysis



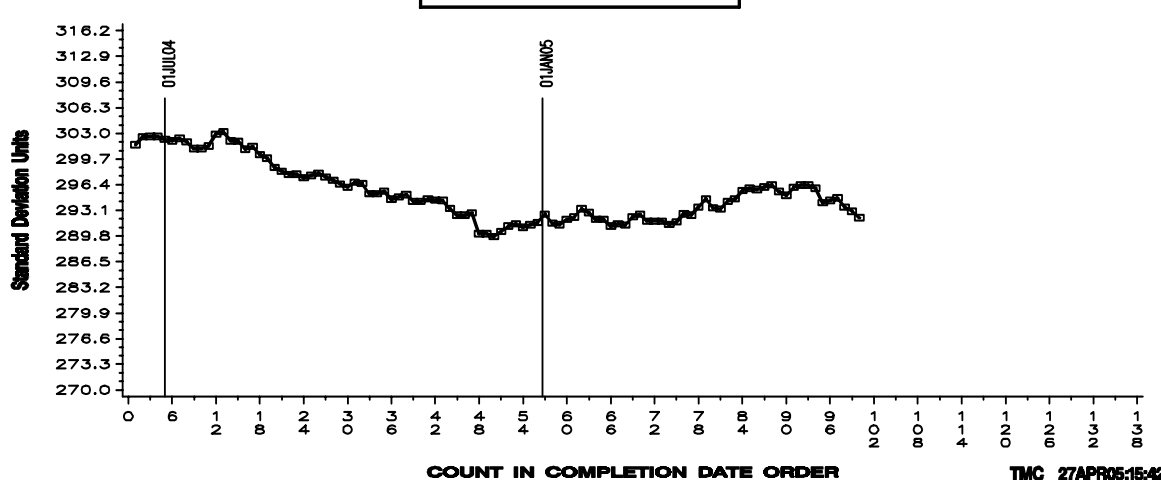
COUNT IN COMPLETION DATE ORDER

LTMS Precision Analysis



COUNT IN COMPLETION DATE ORDER

CUSUM Severity Analysis



COUNT IN COMPLETION DATE ORDER

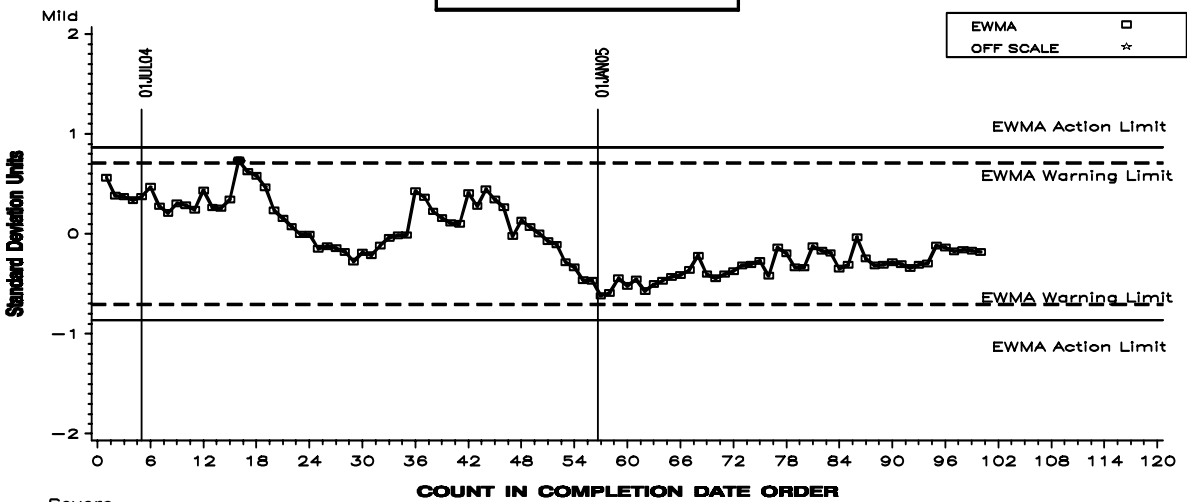
Figure 6

OSCT INDUSTRY OPERATIONALLY VALID DATA

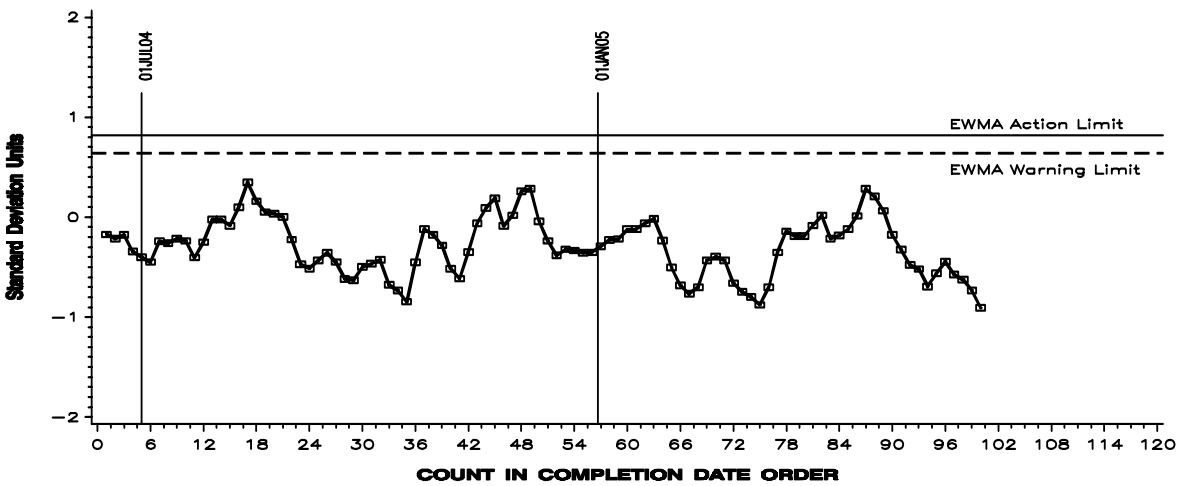
Last 100 Test Results

REFERENCE PERCENT VOLUME CHANGE OVERALL

LTMS Severity Analysis



LTMS Precision Analysis



CUSUM Severity Analysis

