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

MEMORANDUM: 06-030

DATE: May 1, 2006

TO Don Bell, Chairman, OSCT Surveillance Panel

FROM: Donald Lind

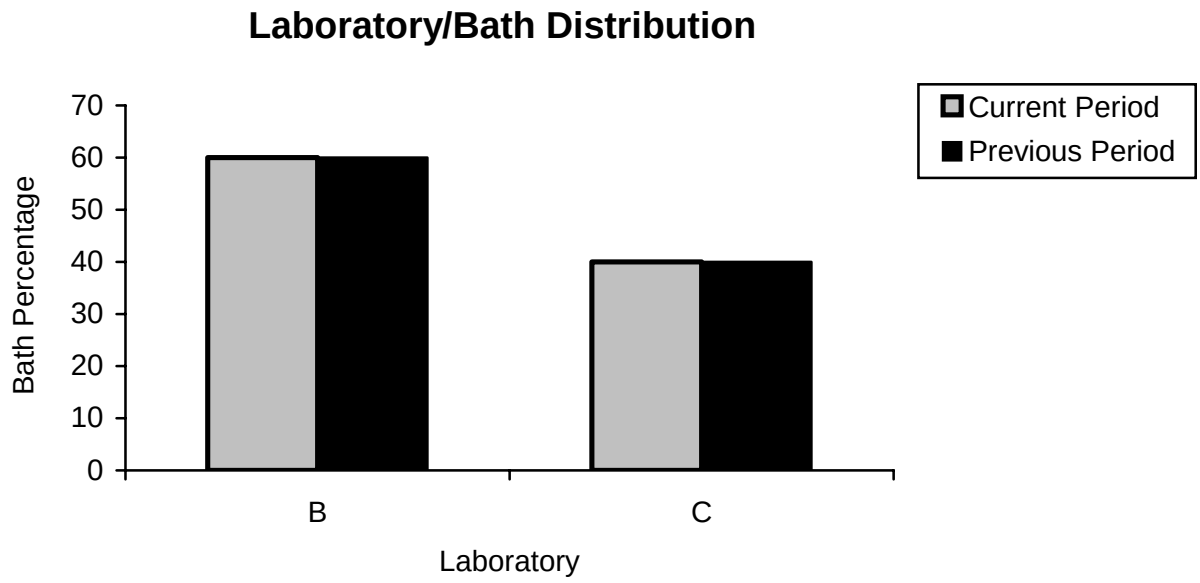
SUBJECT: OSCT Reference Test Status from October 1, 2005 through March 31, 2006

A total of 86 OSCT reference oil results from 2 laboratories were reported during the period October 1, 2005 through March 31, 2006.

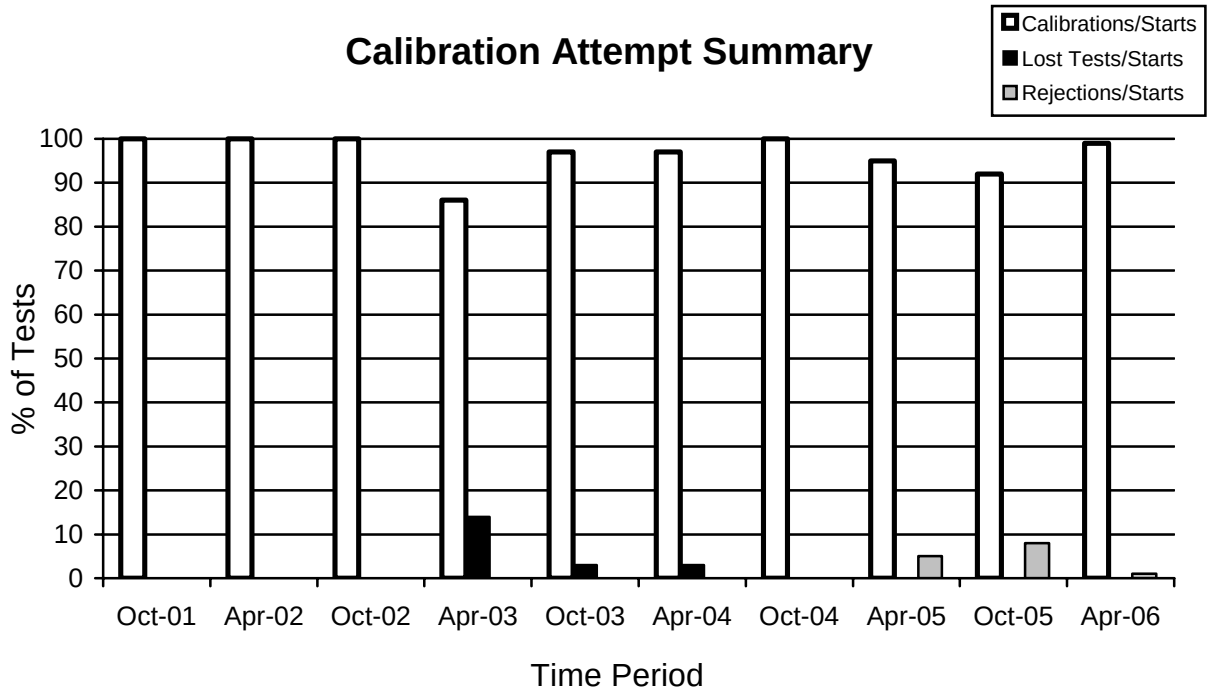
The following table summarizes the status of the reference oil test results reported to the TMC this report period:

Elastomer Type		TMC Validity	No. of Test Oil Results
Fluoroelastomer	Operationally and Statistically Acceptable	AC	30
	Statistically Unacceptable	OC	0
	Operationally Invalid	LC	0
	Aborted	XC	0
	Information Only	NN	0
Polyacrylate	Operationally and Statistically Acceptable	AC	35
	Statistically Unacceptable	OC	1
	Operationally Invalid	LC	0
	Aborted	XC	0
	Information Only	NN	0
Nitrile	Operationally and Statistically Acceptable	AC	11
	Statistically Unacceptable	OC	0
	Operationally Invalid	LC	0
	Aborted	XC	0
	Information Only	NN	0
	Donated Tests for New Reference Oil	AG	9
	TOTAL		86

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



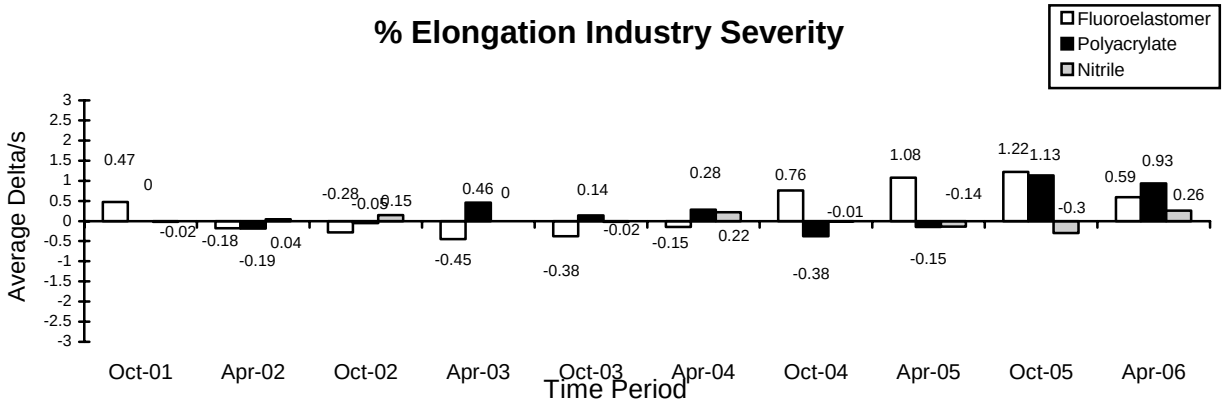
Attempted calibration tests are depicted graphically below by report period:



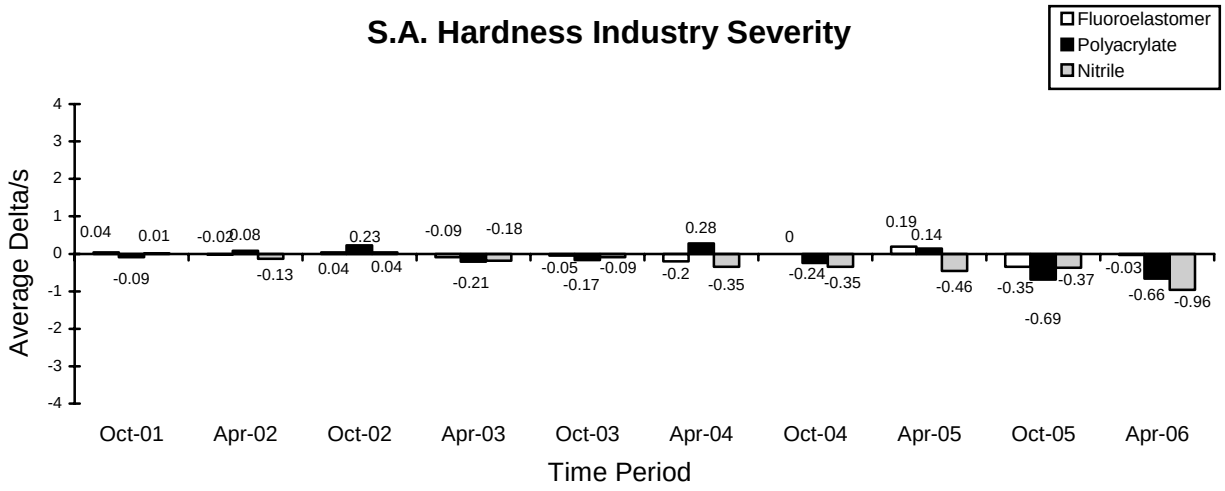
The calibration per start rate has increased, the lost test per start rate remained the same, and the rejected per start rate has decreased when compared to the last report period.

INDUSTRY TEST SEVERITY

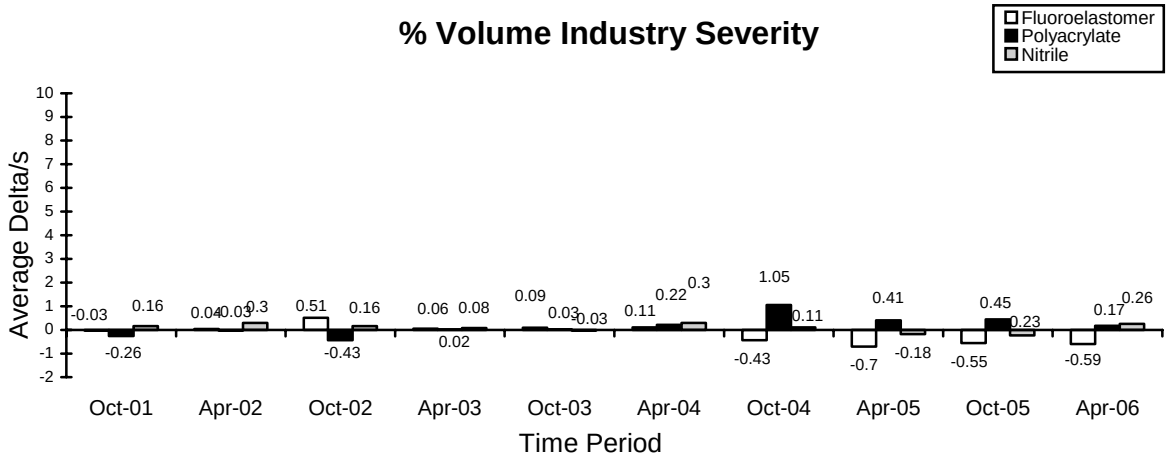
Percent elongation industry mean delta/s bar charts for the last ten report periods, for each elastomer material are shown below. Percent elongation for fluoroelastomer, polyacrylate and nitrile materials trended mild for this report period.



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, polyacrylate and nitrile materials trended severe for this report period

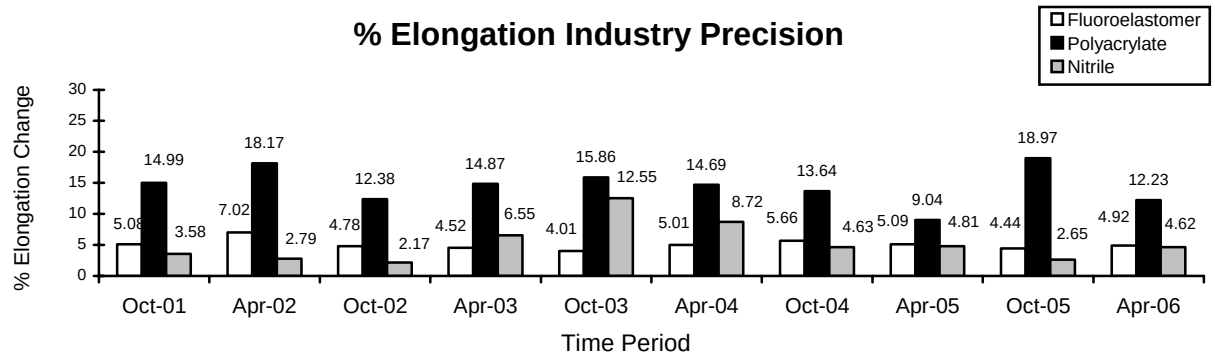


Percent volume industry mean delta/s bar charts for the last ten report periods, for each elastomer material are shown below. Percent volume for the polyacrylate and nitrile materials trended mild and the fluoroelastomer material trended severe of target for this report period.

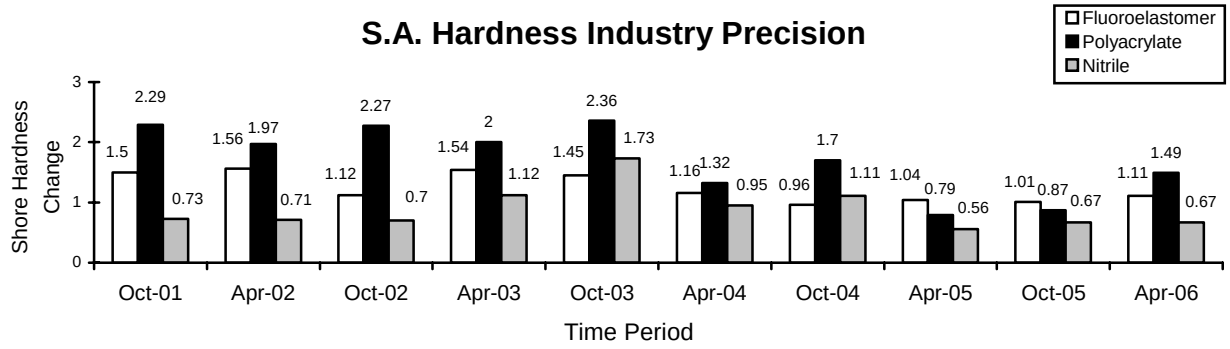


INDUSTRY TEST PRECISION

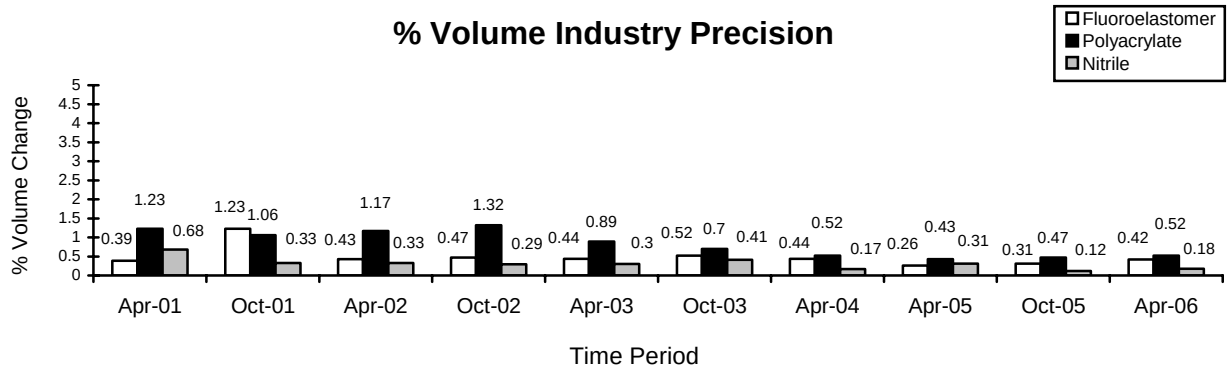
Percent elongation industry precision estimates for elastomer material, for the last ten report periods are shown below. Precision for polyacrylate has improved with respect to the previous period. Precision for nitrile and fluoroelastomer has degraded with respect to the previous period. Precision for 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 nitrile elastomer has remained the same with respect to the previous period. Precision for polyacrylate and fluoroelastomer elastomers has degraded 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, fluoroelastomer, and nitrile elastomers have 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 were in control this period. Shore hardness change triggered twelve EWMA severity warning alarms, two EWMA severity action alarms, and no precision EWMA alarms. These alarms were due to five test results of 1.90 standard deviations severe from one lab (Lab C). Elongation change triggered numerous EWMA severity alarms and no precision EWMA alarms. Approximately half of the alarms are related to the polyacrylate batch PA335. The remaining severity EWMA alarms appear to be related to the fluoroelastomer batches FL363 and FL364. Elongation change for fluoroelastomer has trended mild since the introduction of elastomer batches FL361, FL362, FL363, and FL364. Elongation change for polyacrylate has trended mild since the introduction of elastomer batch PA335.

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	168
B	11	121	0	6
C	12	9	1	4
TMC	665	250	0	250

INFORMATION LETTERS

There were two information letters issued during this report period Information Letter 05-02, Sequence Number 7 was issued on December 2, 2005 and Information Letter 06-01, Sequence Number 8 was issued on March 27, 2006. Items changed with this information letter are documented in the OSCT timeline (Table 1).

TMC LAB VISITS

There was one lab visit conducted this report period with no discrepancies noted.

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-04-2006.pdf

Distribution: Email

Table 1

Effective Date	OSCT Timeline Topic	IL#
19961001	Test Report Forms and Data Dictionary	96-1
19970324	Elastomer Requirements For Testing a Non-reference Oil	97-1
19970701	Specimen Cleaning Procedure	97-2
19971201	Revised Test Report Forms and Data Dictionary	97-3
19980504	Seal Elastomer Shelf Life	98-1
19980504	Revised Reference Oil and Non-reference Oil Requirements	98-1
19980504	Addition of Calibration Requirements for Hardness Durometer, Balance, and Tension Testing Machine	98-1
19980817	Revised Test Report Forms and Data Dictionary	98-1
20050815	Updated Test Precision	05-1
20050815	Rounding Test Results Using ASTM E 29	05-1
20051102	Initial and Final Volume Measurements	05-2
20060327	Addition of a Calibration Procedure for the Tension Testing Machine	06-1
20060327	New Reference Oil Testing Section	06-1
20060327	Editorial Changes	06-1

Figure 1

OSCT INDUSTRY OPERATIONALLY VALID DATA

REFERENCE ELONGATION CHANGE OVERALL

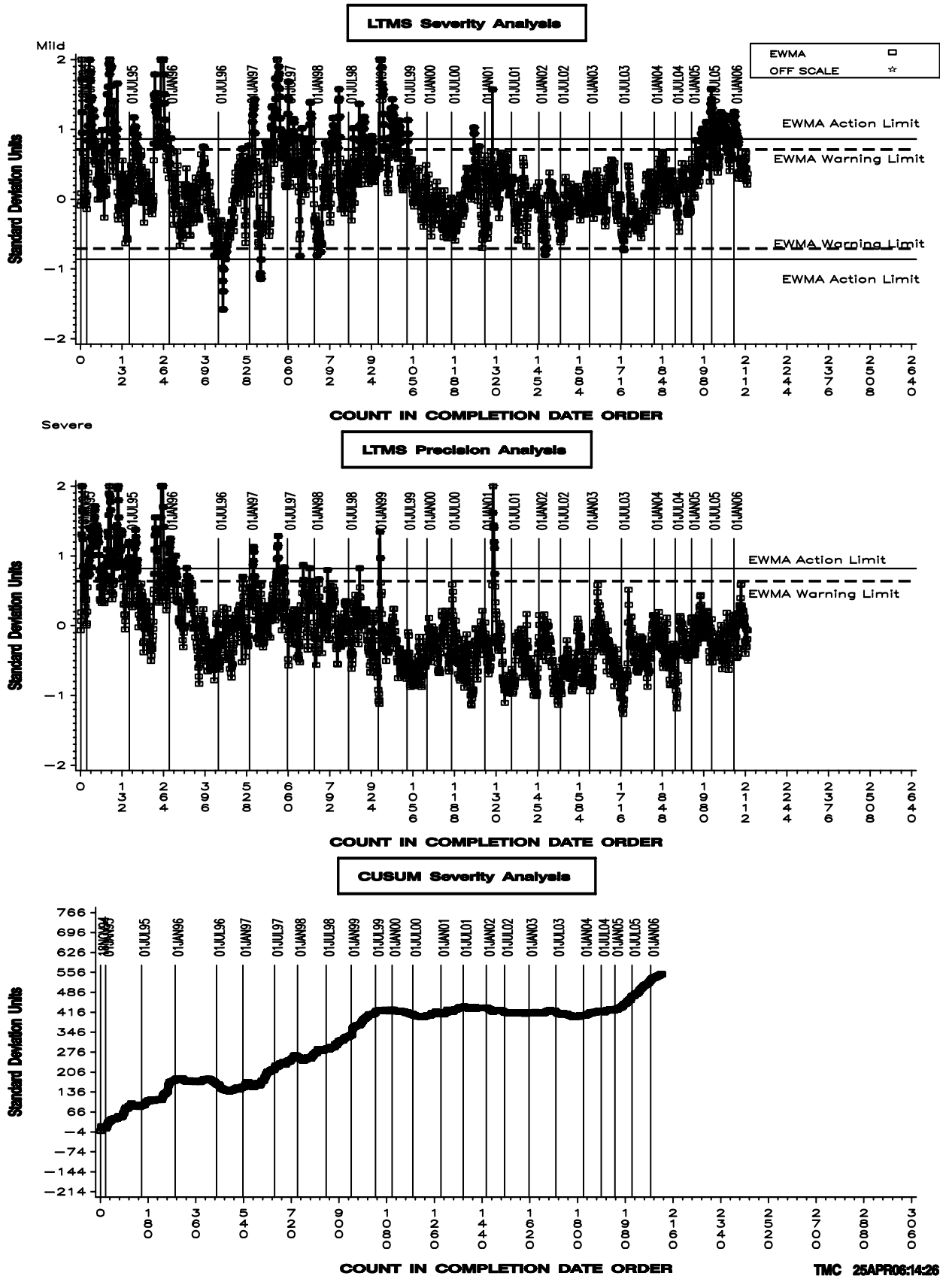
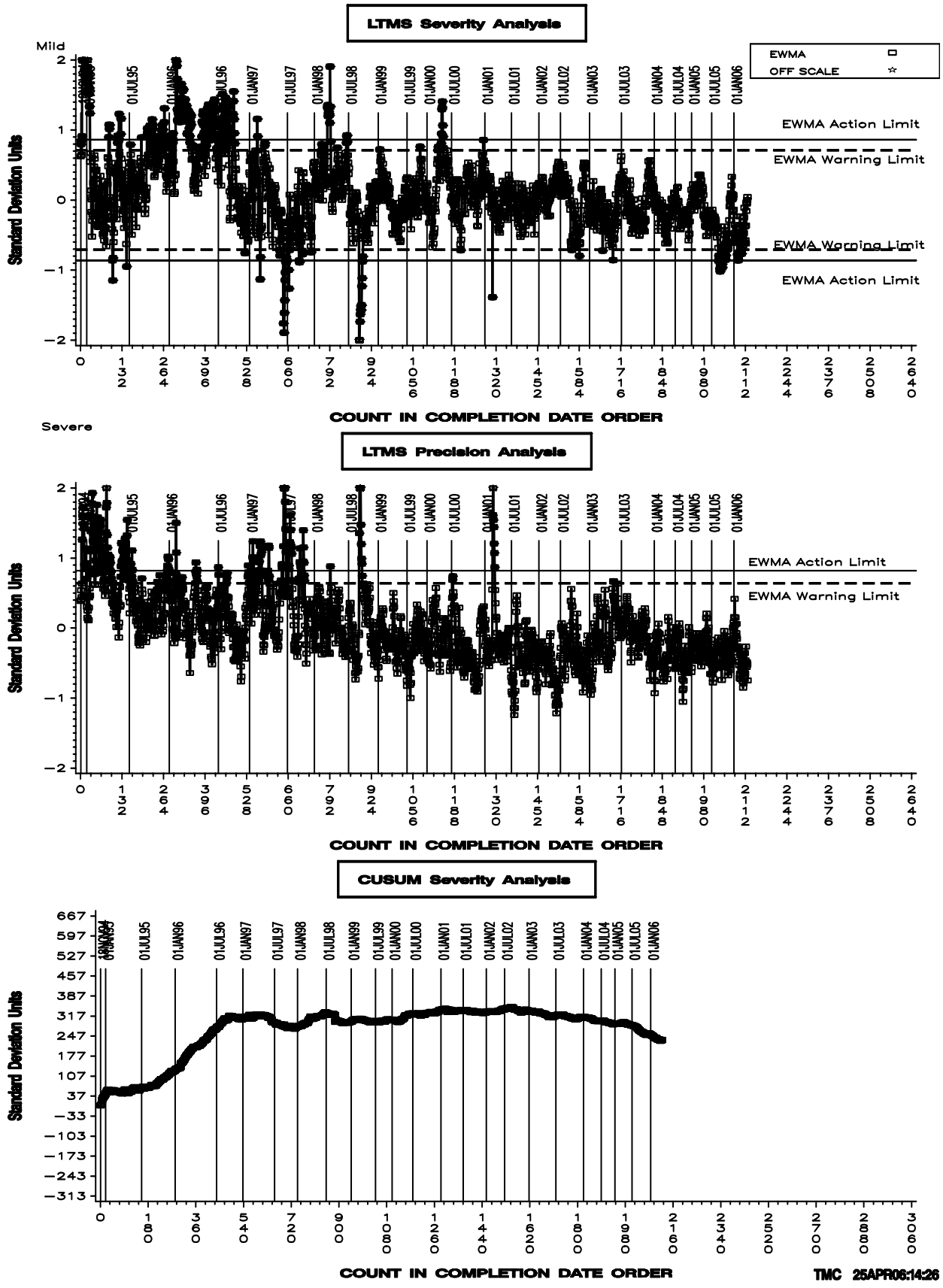


Figure 2

OSCT INDUSTRY OPERATIONALLY VALID DATA

REFERENCE SHORE A HARDNESS CHANGE OVERAL



OSCT INDUSTRY OPERATIONALLY VALID DATA

REFERENCE PERCENT VOLUME CHANGE OVERALL

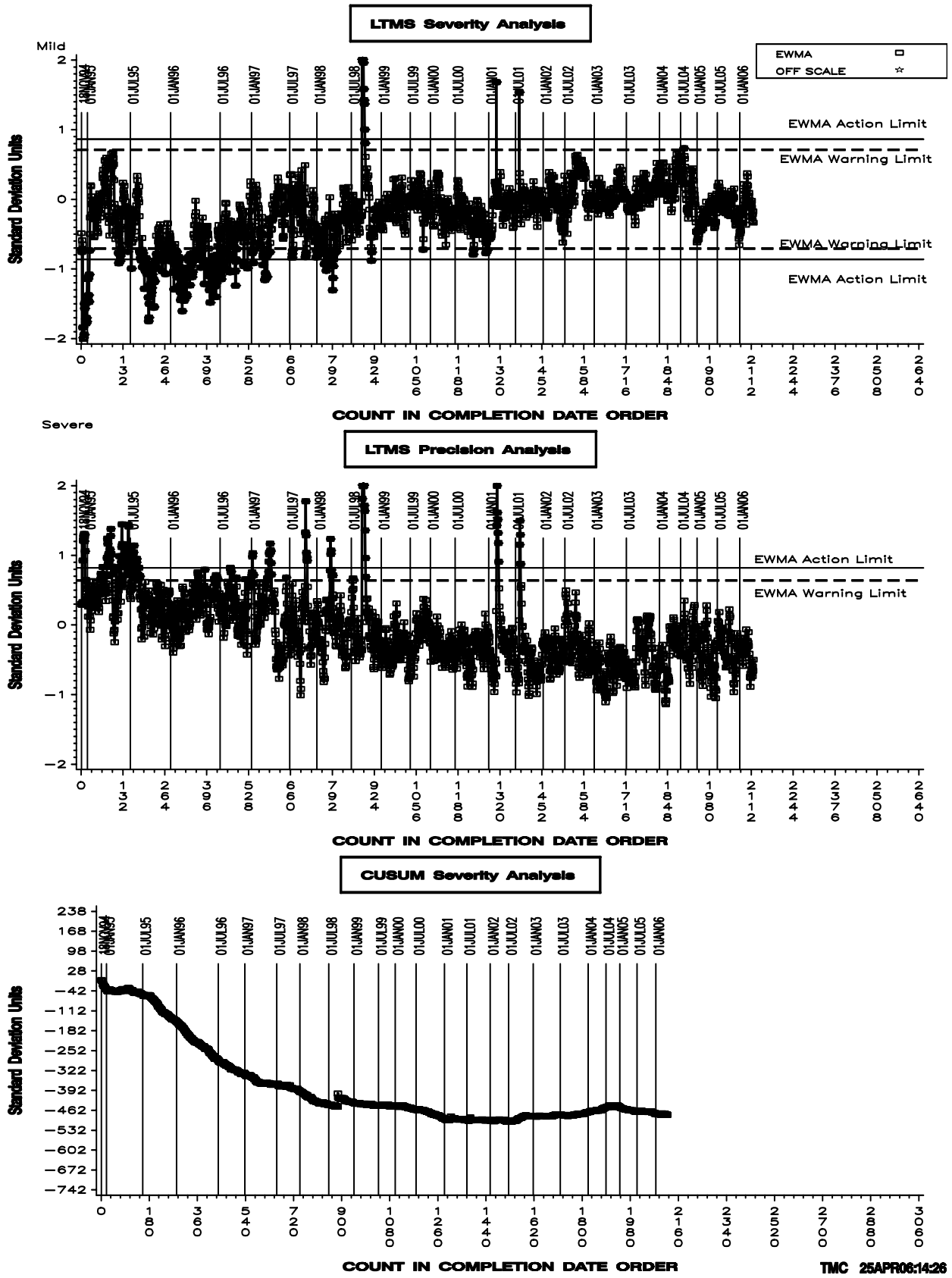
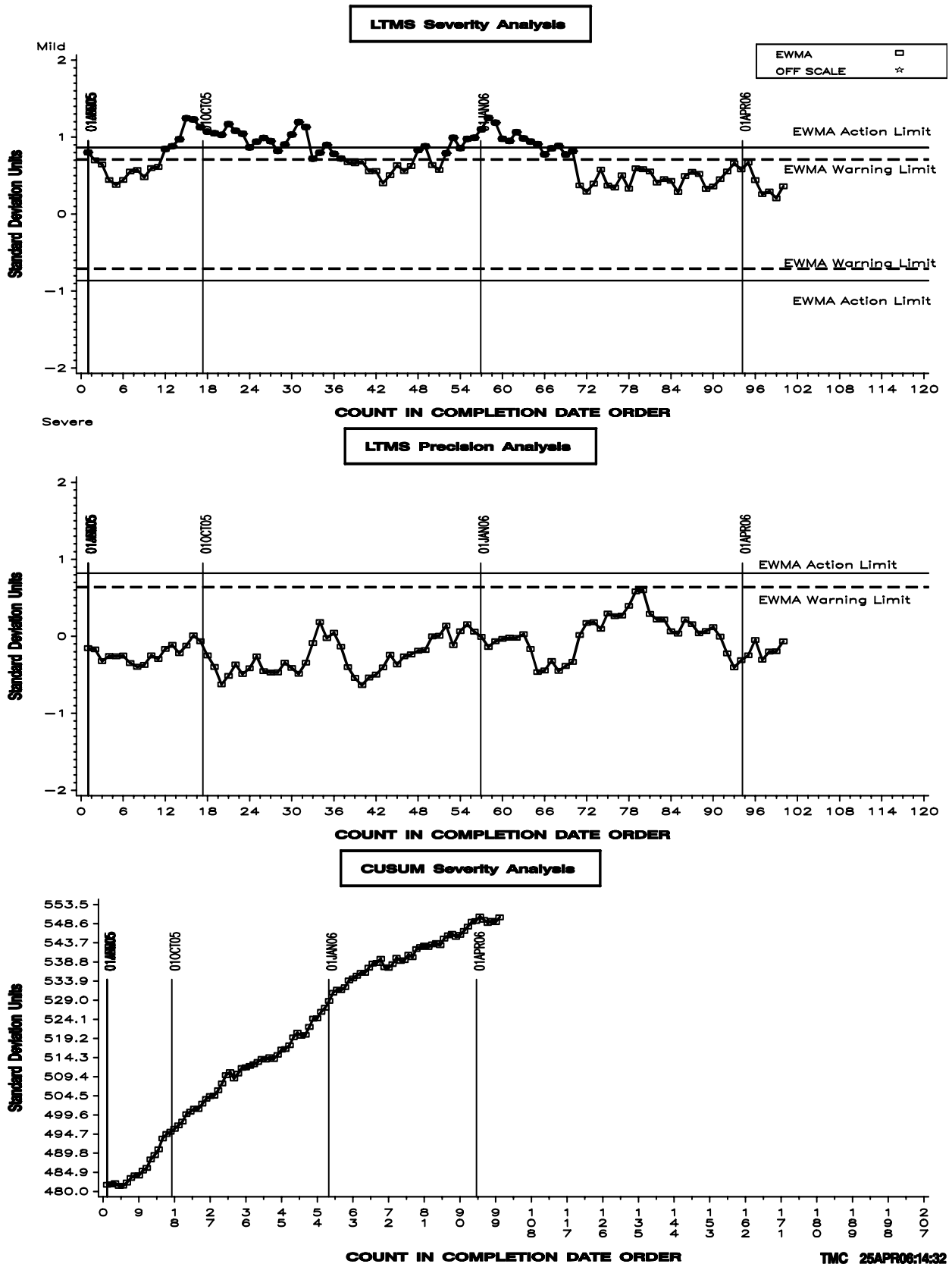


Figure 4

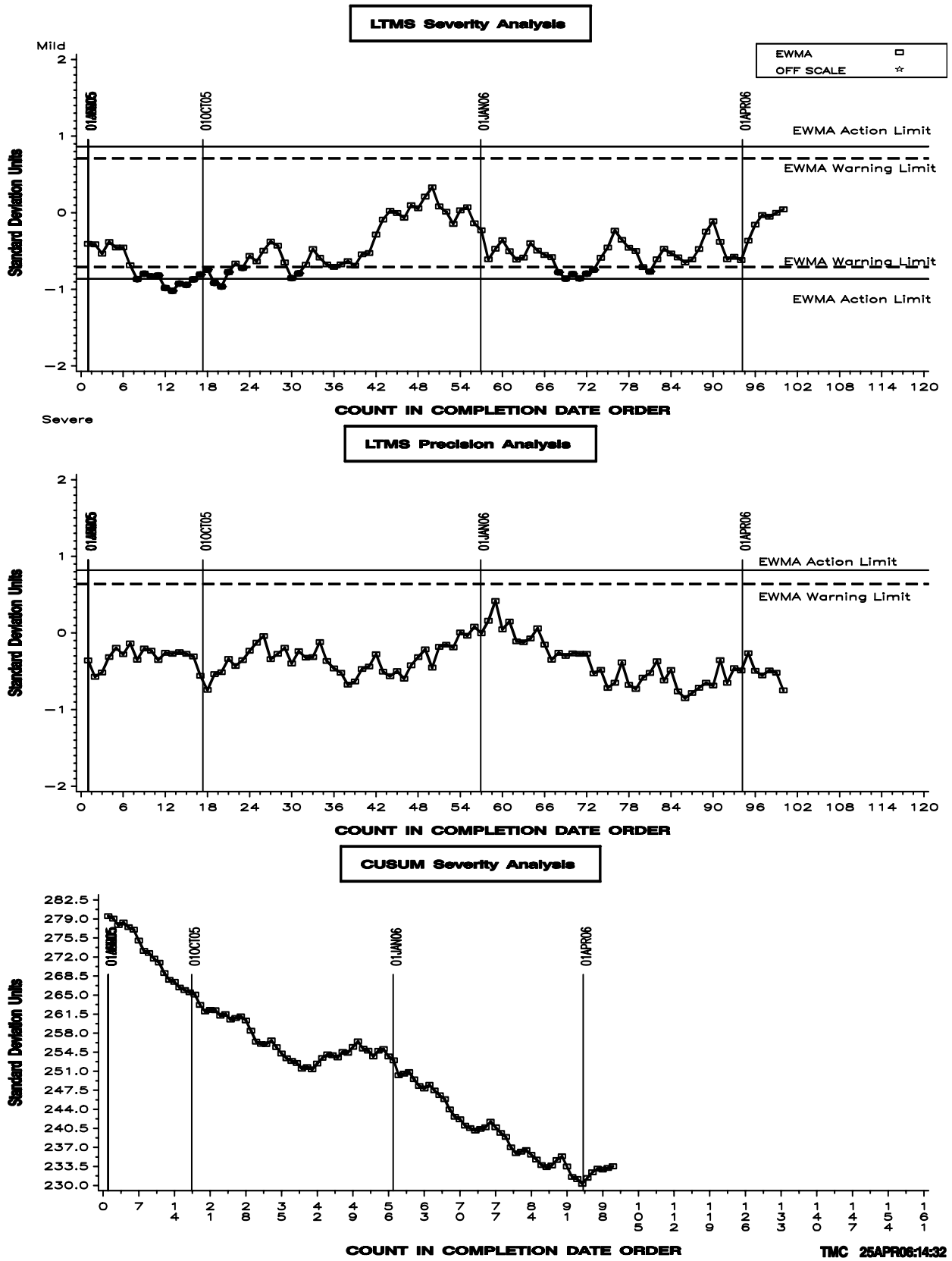
OSCT INDUSTRY OPERATIONALLY VALID DATA

REFERENCE ELONGATION CHANGE OVERALL



OSCT INDUSTRY OPERATIONALLY VALID DATA

REFERENCE SHORE A HARDNESS CHANGE OVERAL



OSCT INDUSTRY OPERATIONALLY VALID DATA

REFERENCE PERCENT VOLUME CHANGE OVERALL