



Test Monitoring Center

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(412) 365-1000

MEMORANDUM: 05-067

DATE: October 7, 2005

TO Claire Whitton, Chairman, OSCT Surveillance Panel

FROM: Donald Lind

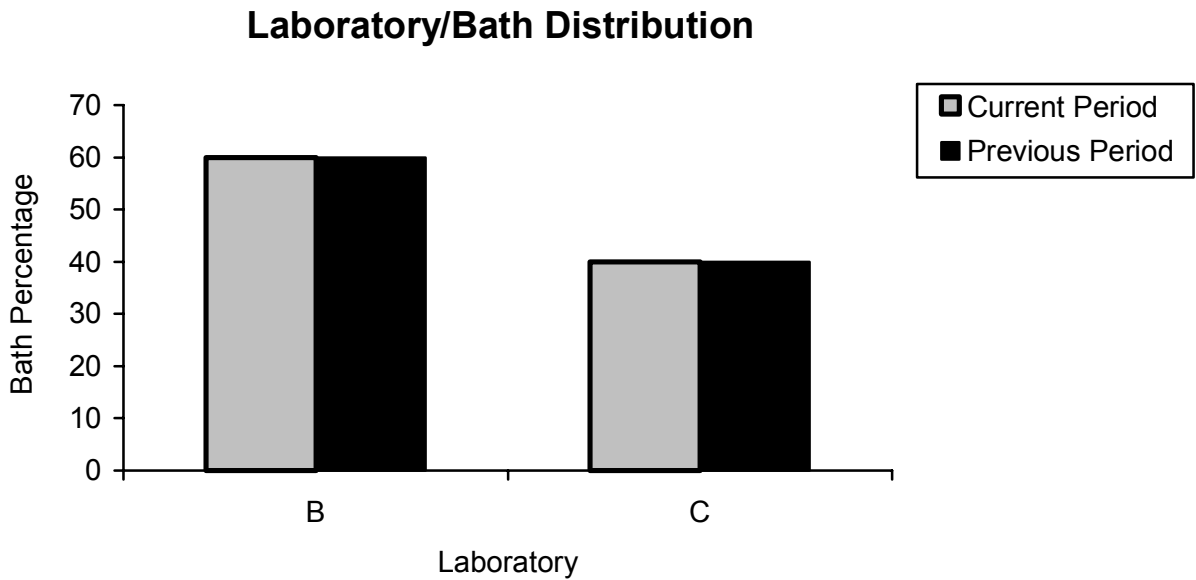
SUBJECT: OSCT Reference Test Status from April 1, 2005 through September 30, 2005

A total of 62 OSCT reference oil results from 2 laboratories were reported during the period April 1, 2005 through September 30, 2005.

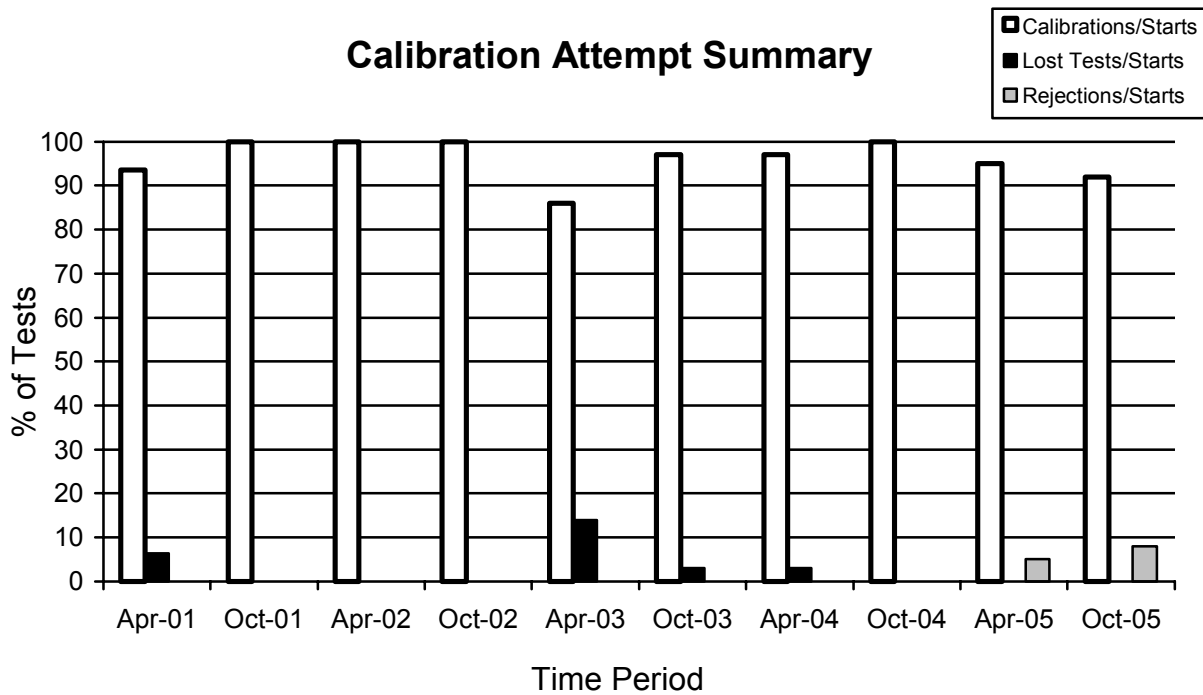
The following table summarizes the status of the reference oil test results reported to the TMC this report period:

Elastomer Type		TMC Validity	No. of Test Oil Results
Fluoroelastomer	Operationally and Statistically Acceptable	AC	20
	Statistically Unacceptable	OC	2
	Operationally Invalid	LC	0
	Aborted	XC	0
	Information Only	NN	0
Polyacrylate	Operationally and Statistically Acceptable	AC	21
	Statistically Unacceptable	OC	3
	Operationally Invalid	LC	0
	Aborted	XC	0
	Information Only	NN	2
Nitrile	Operationally and Statistically Acceptable	AC	14
	Statistically Unacceptable	OC	0
	Operationally Invalid	LC	0
	Aborted	XC	0
	Information Only	NN	0
TOTAL			62

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



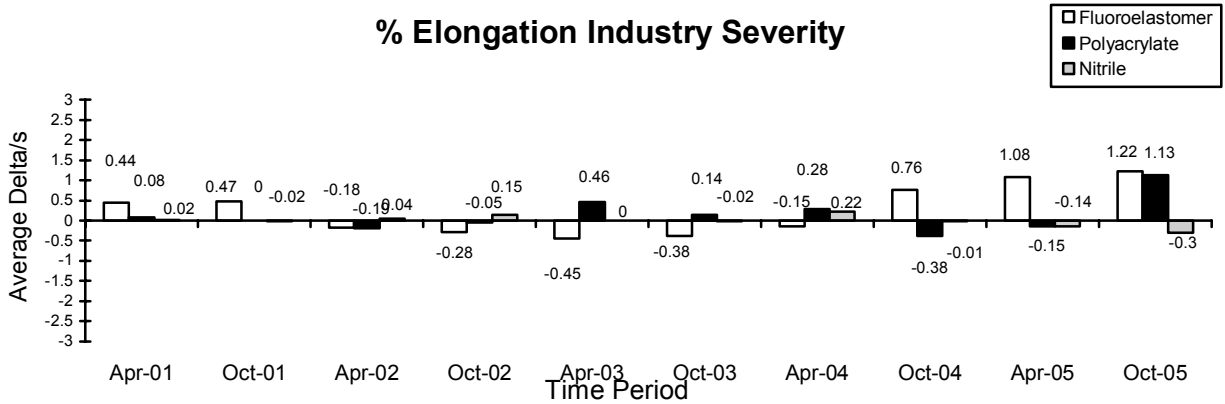
Attempted calibration tests are depicted graphically below by report period:



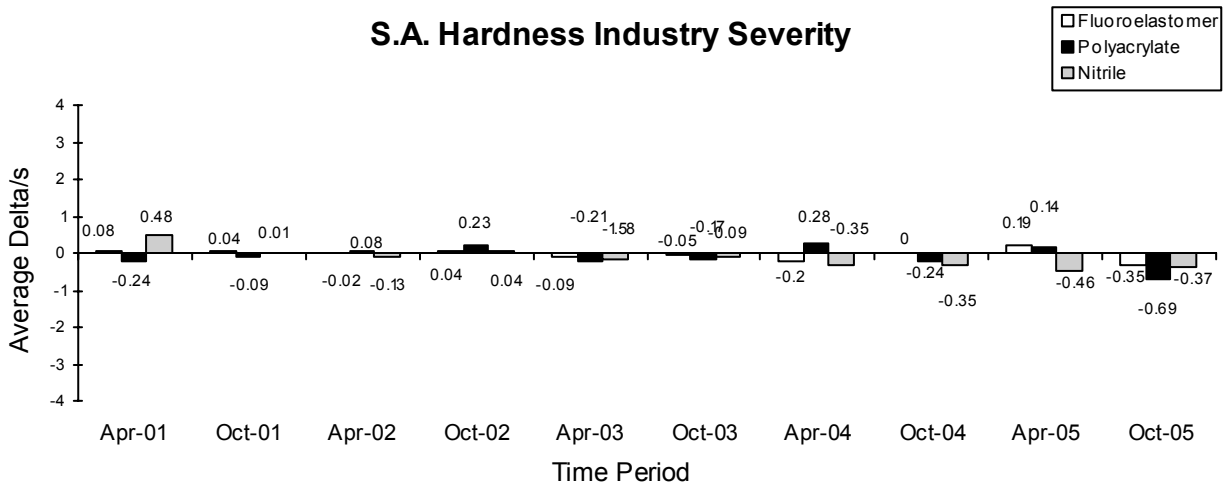
The calibration per start rate has decreased, the lost test per start rate remained the same, and the rejected per start rate has increased when compared to the last report period.

INDUSTRY TEST SEVERITY

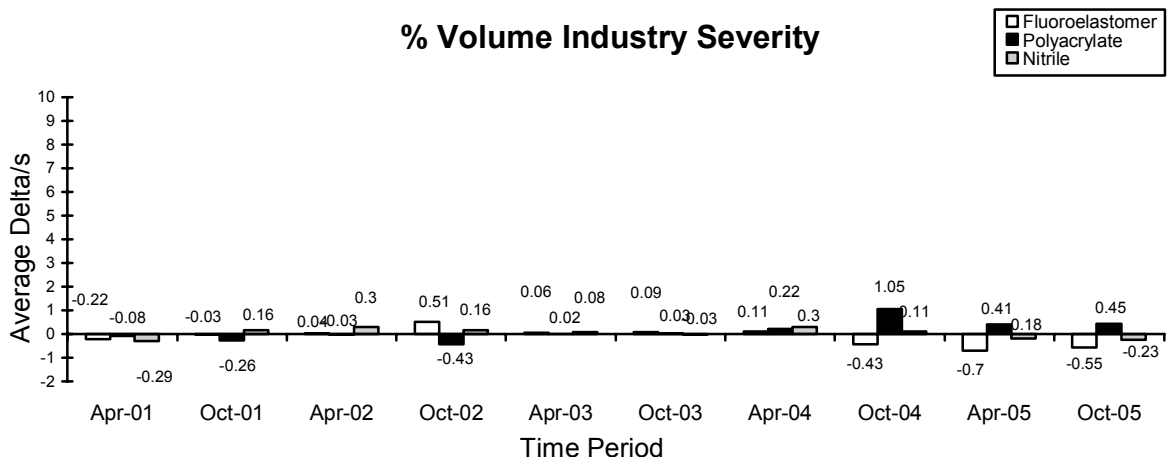
Percent elongation industry mean delta/s bar charts for the last ten report periods, for each elastomer material are shown below. Percent elongation for the fluoroelastomer and polyacrylate materials trended mild and the nitrile material trended slightly severe for this report period.



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

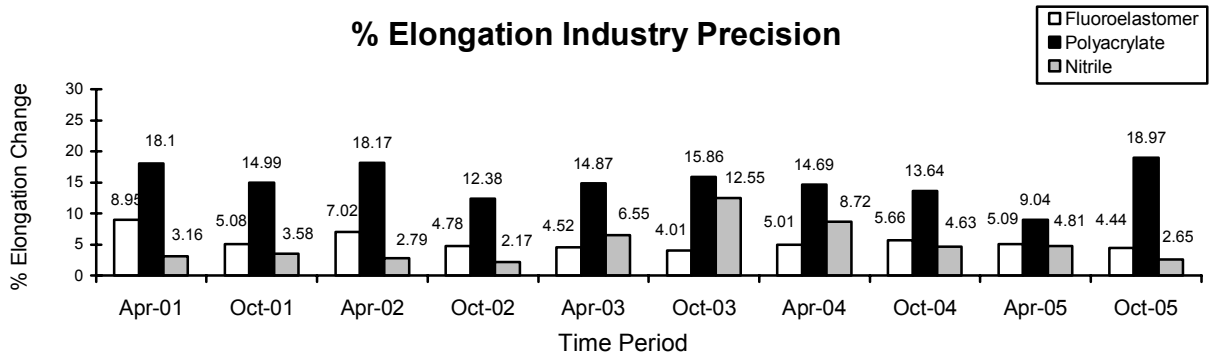


Percent volume industry mean delta/s bar charts for the last ten report periods, for each elastomer material are shown below. Percent volume for the fluoroelastomer and nitrile materials trended severe and the polyacrylate material trended mild of target for this report period.

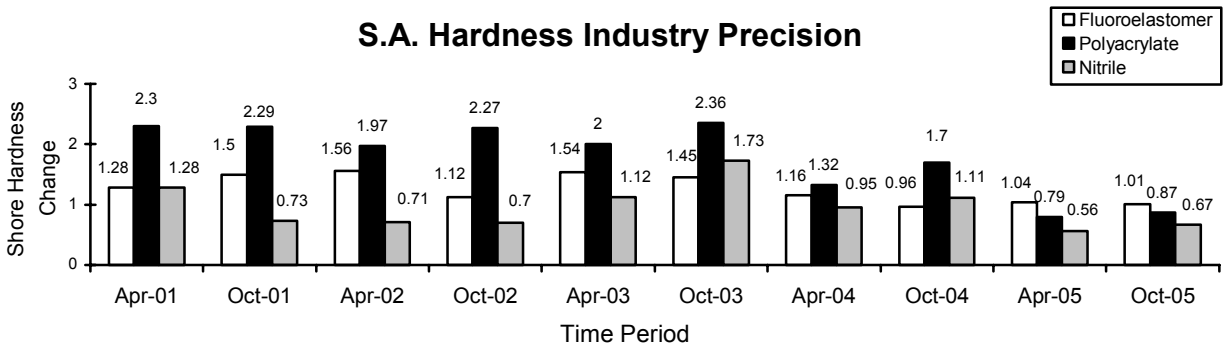


INDUSTRY TEST PRECISION

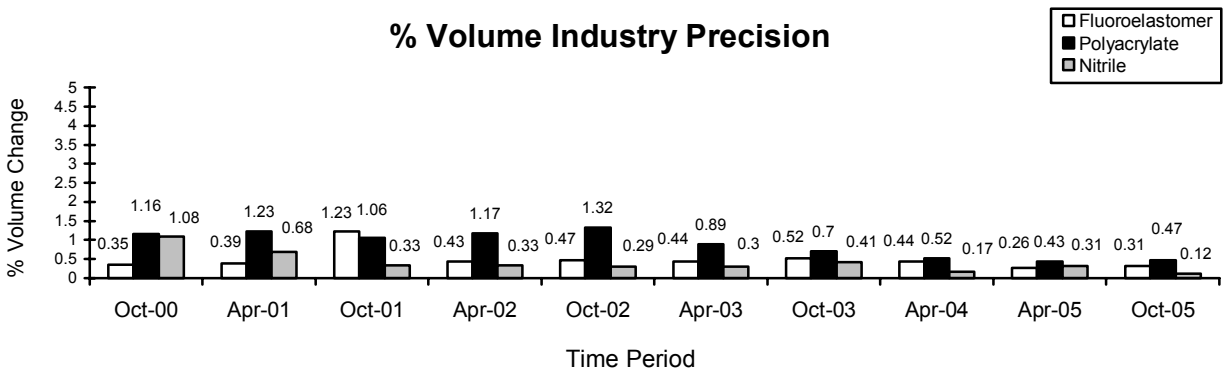
Percent elongation industry precision estimates for elastomer material, for the last ten report periods are shown below. Precision for fluoroelastomer and nitrile has improved with respect to the previous period. Precision for polyacrylate has degraded with respect to the previous period. Precision for 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 fluoroelastomer elastomer has improved slightly with respect to the previous period. Precision for polyacrylate and nitrile elastomers has degraded slightly 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 degraded slightly with respect to the previous period. Precision for the nitrile elastomer has improved 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 four EWMA severity warning alarms, six EWMA severity action alarms, and no precision EWMA alarms. These alarms were due to three test results of 2.00 standard deviations severe from one lab (Lab A). 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 FL362, FL363, and FL364. Elongation change for fluoroelastomer has trended mild since the introduction of elastomer batches FL361, FL362, FL363, and FL364.

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	13	19	0	6
C	25	30	2	6
TMC	682	265	0	263

INFORMATION LETTERS

There was one information letter issued during this report period Information Letter 05-01, Sequence Number 6 was issued on August 15, 2005. Items changed with this information letter are documented in the OSCT timeline (Table 1).

TMC LAB VISITS

There were two lab visits conducted this report period. The only discrepancy noted was that the two labs were using different Instron calibration procedures. Both labs are now using similar procedures.

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-10-2005.pdf>

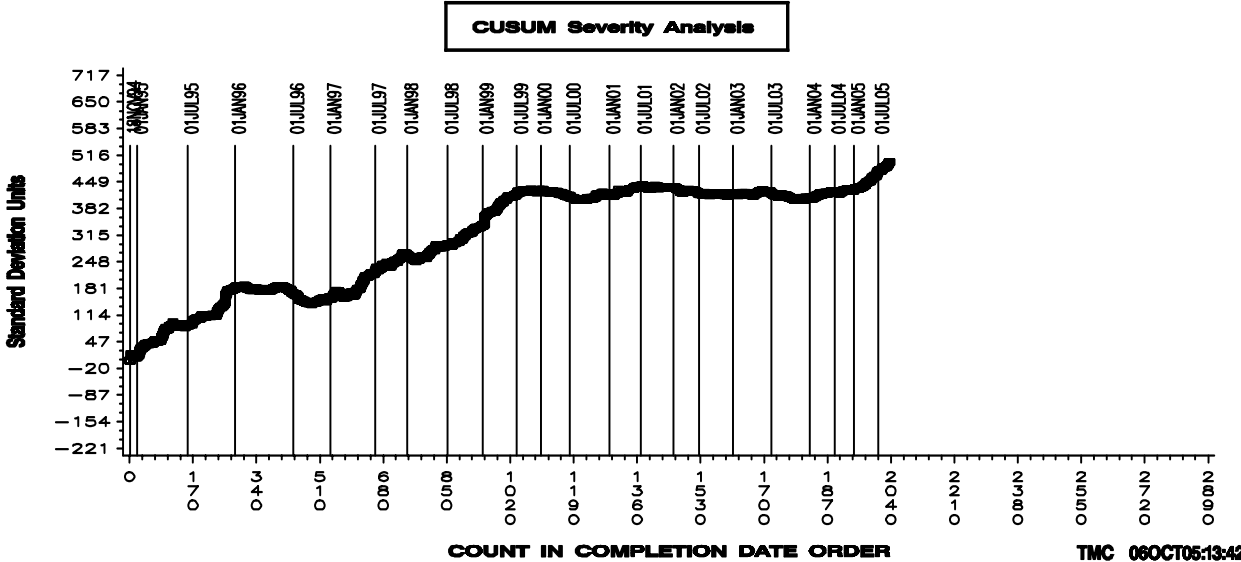
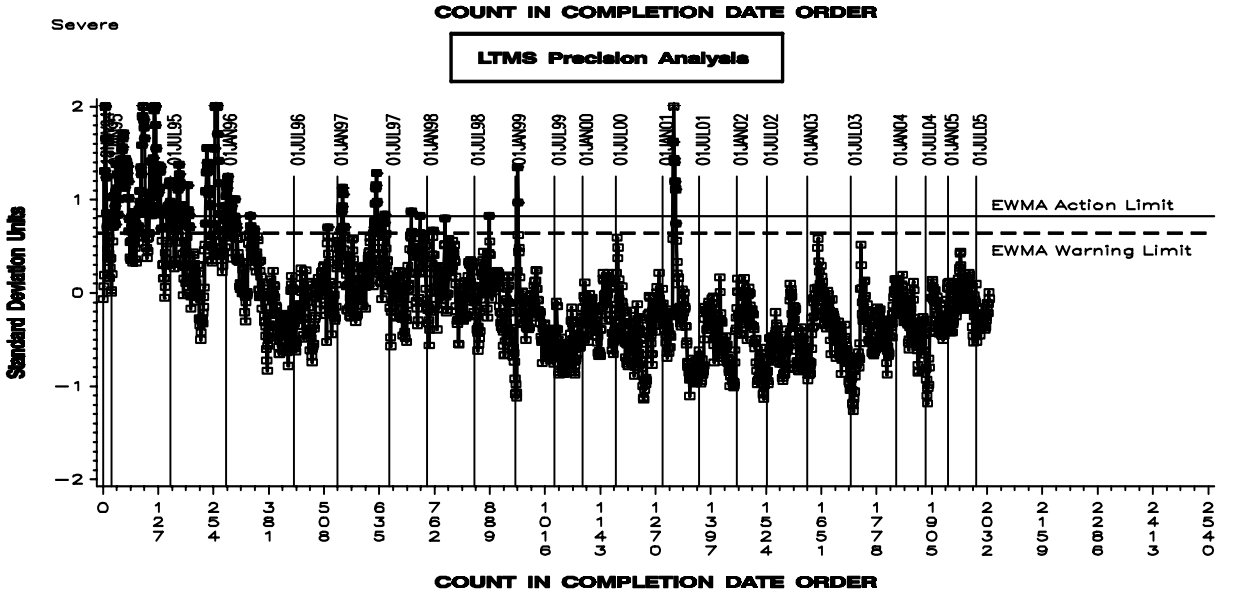
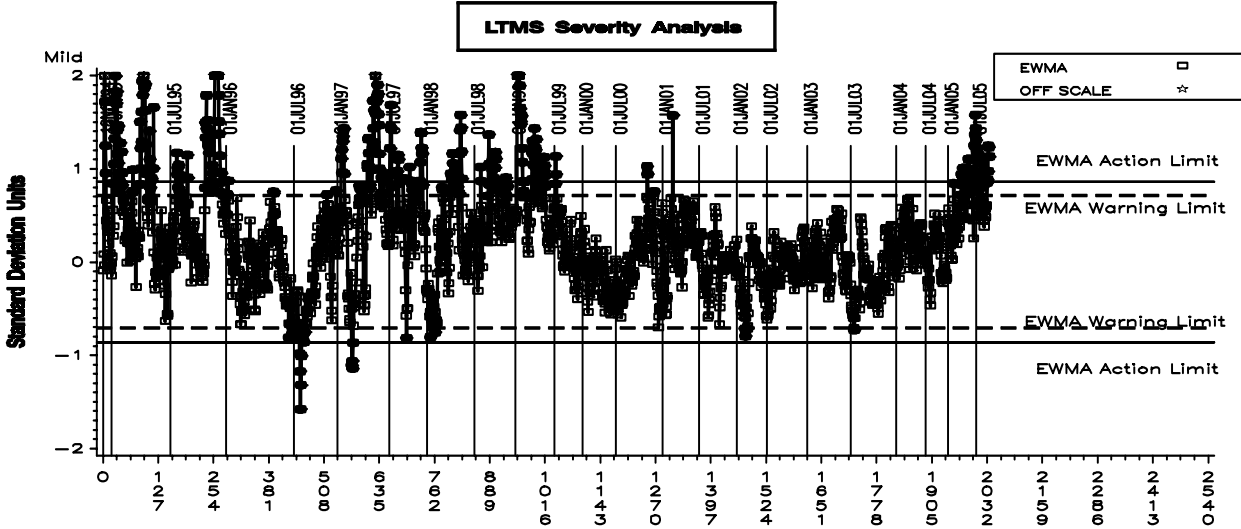
Distribution: Email

Table 1

Effective Date	L-42 Timeline	IL#
	Topic	
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

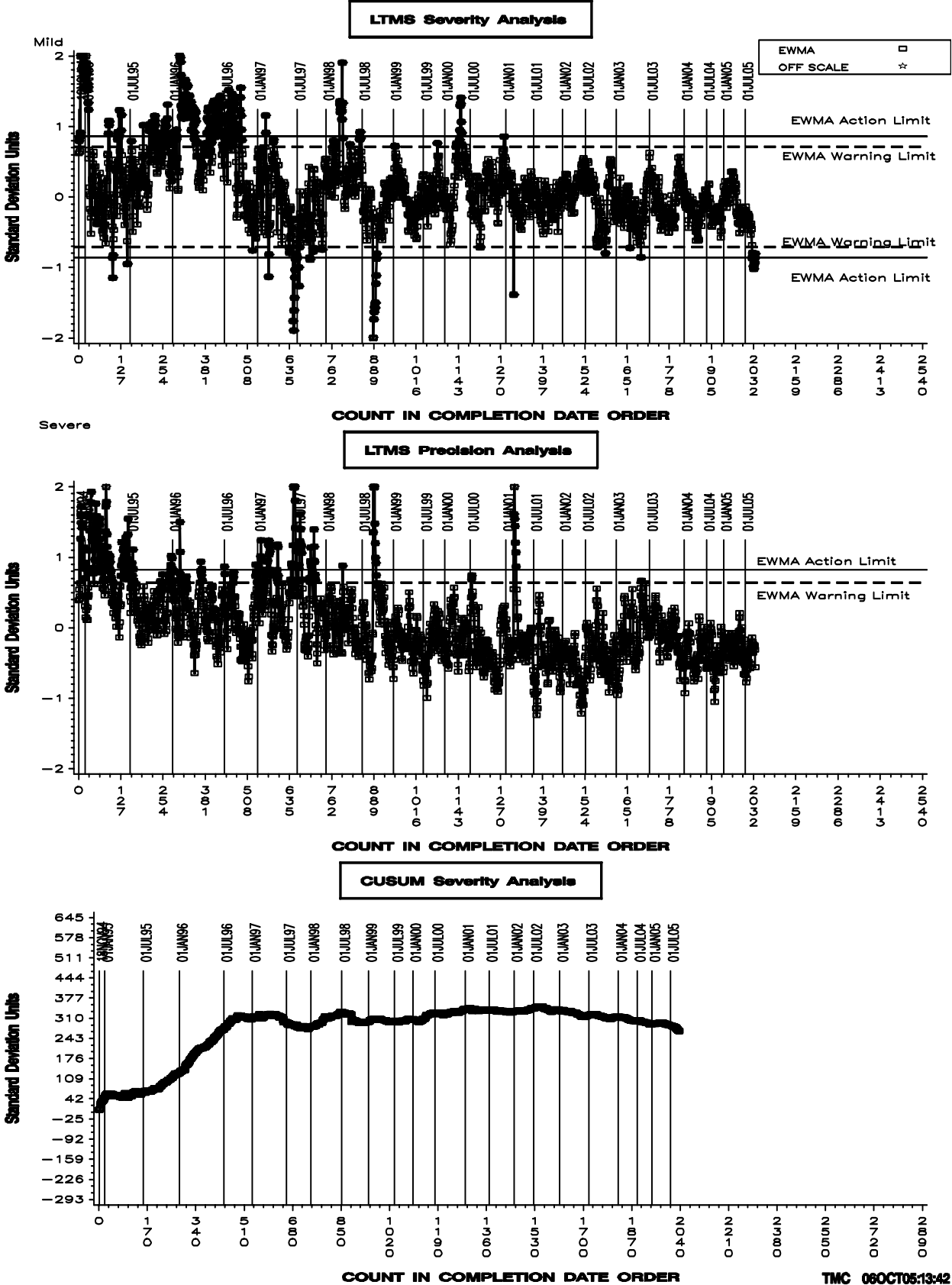
OSCT INDUSTRY OPERATIONALLY VALID DATA

REFERENCE ELONGATION CHANGE OVERALL



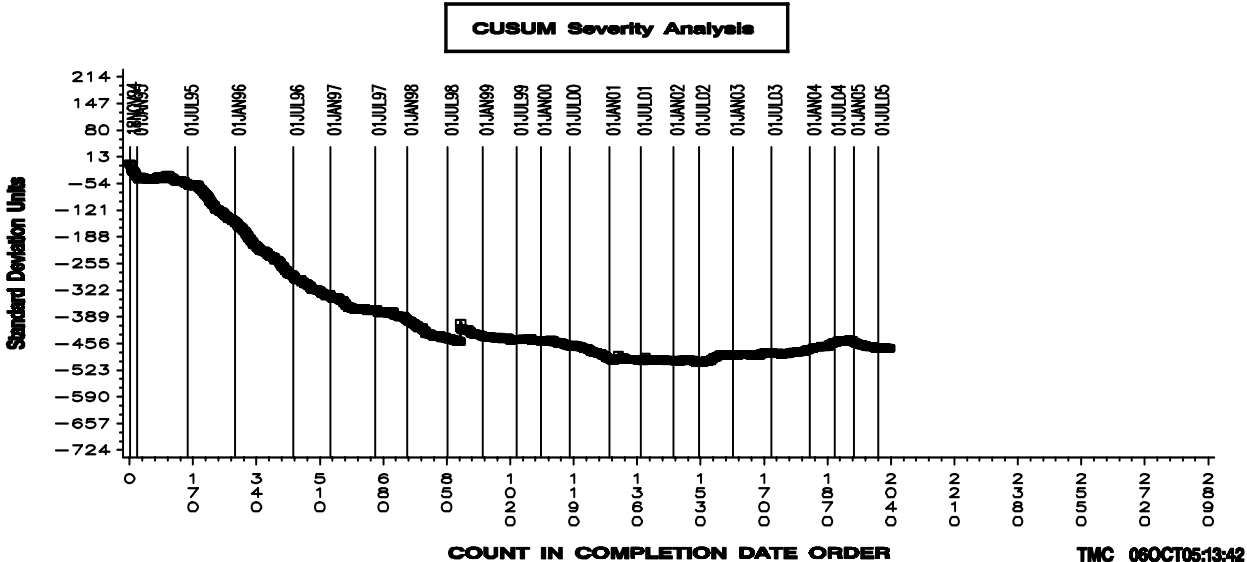
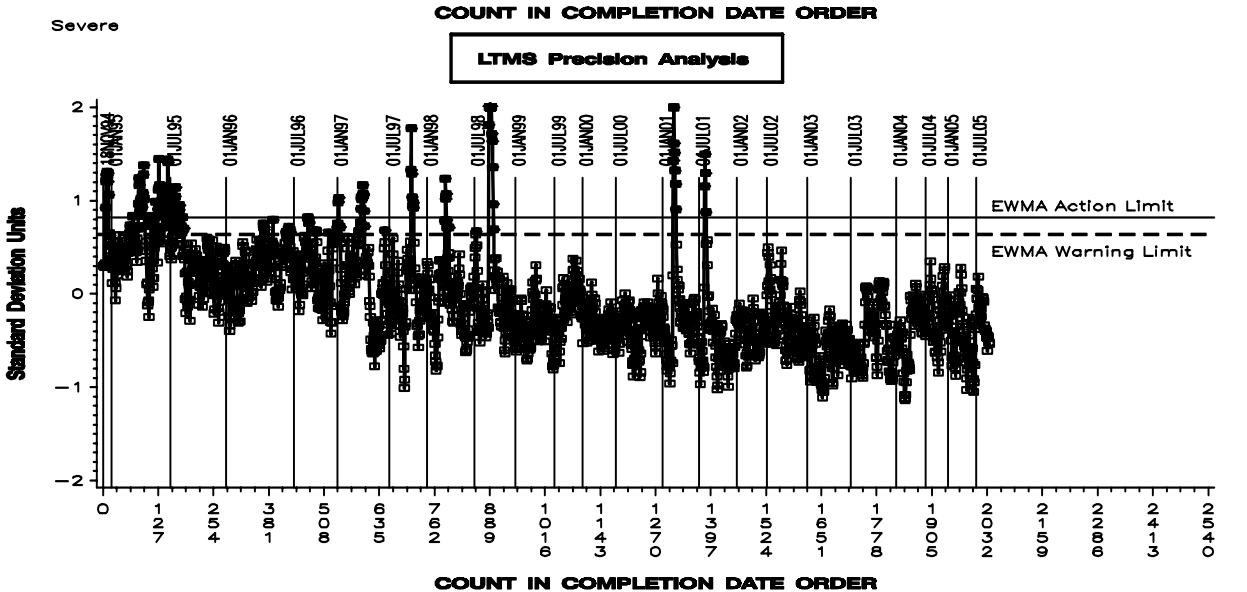
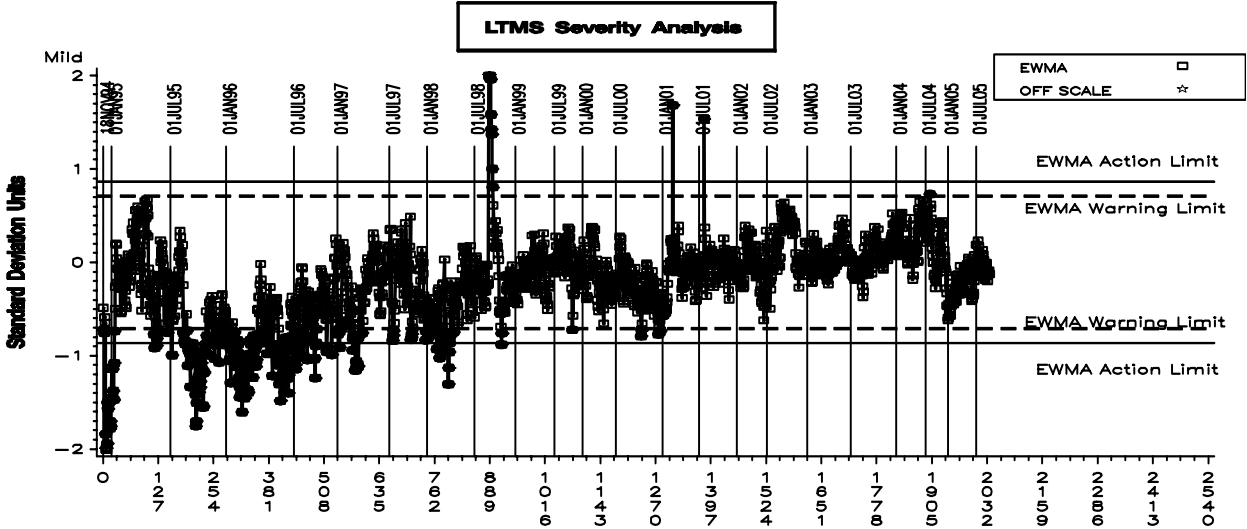
OSCT INDUSTRY OPERATIONALLY VALID DATA

REFERENCE SHORE A HARDNESS CHANGE OVERAL



OSCT INDUSTRY OPERATIONALLY VALID DATA

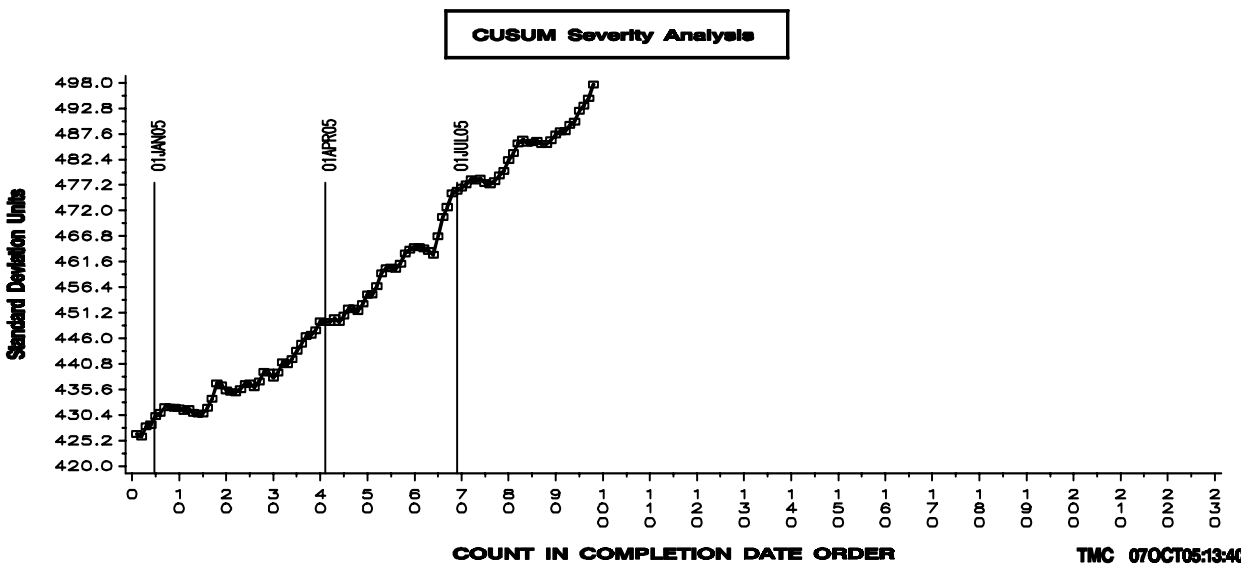
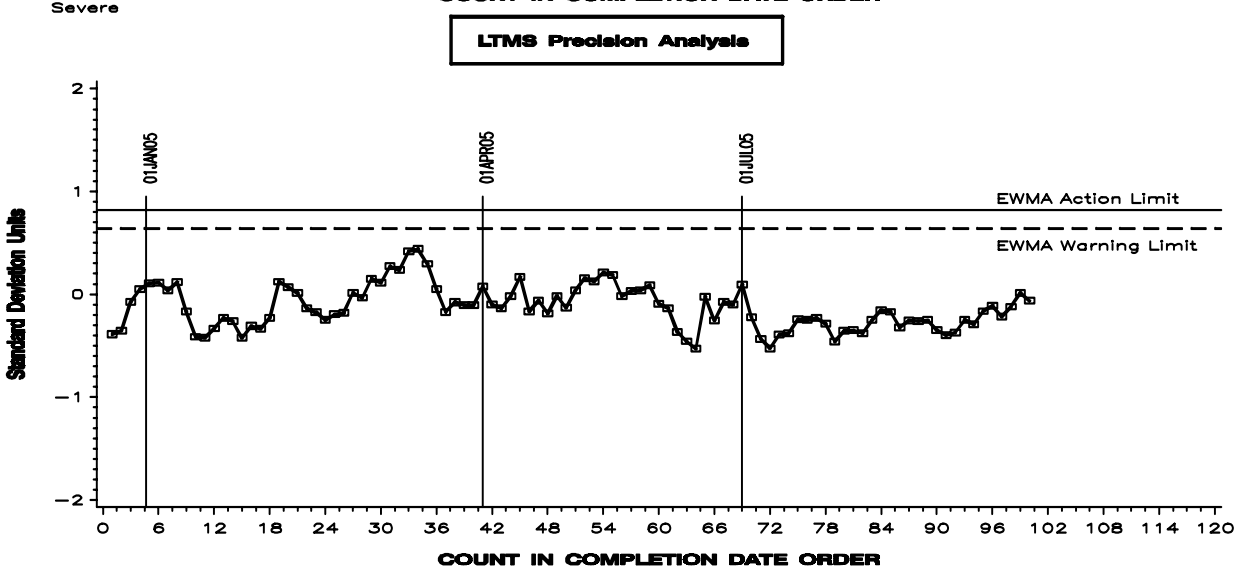
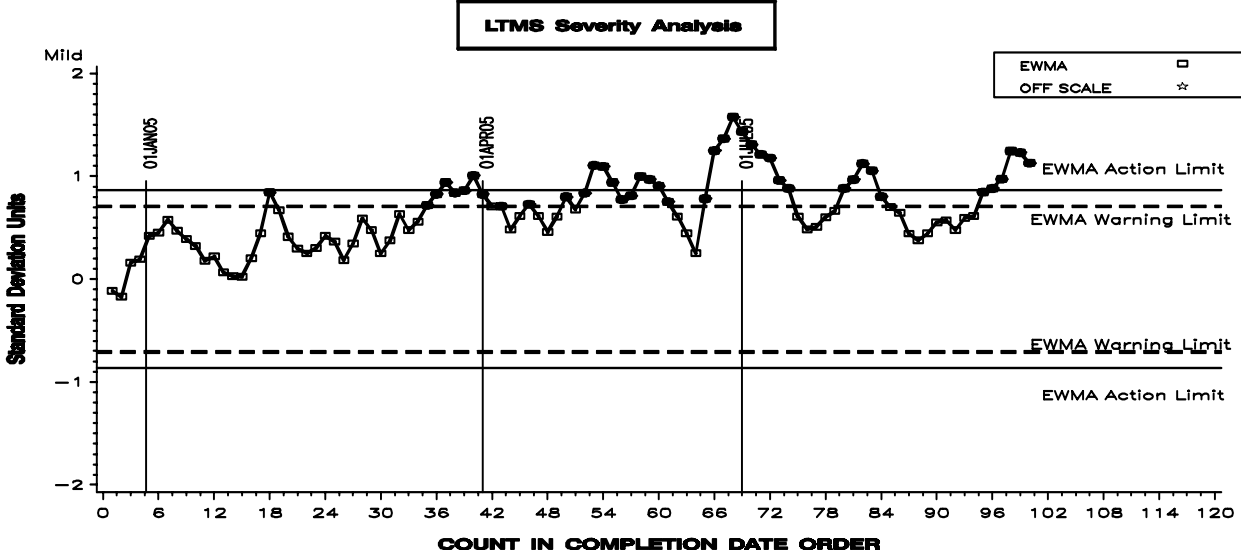
REFERENCE PERCENT VOLUME CHANGE OVERALL



OSCT INDUSTRY OPERATIONALLY VALID DATA

Last 100 Data Points

REFERENCE ELONGATION CHANGE OVERALL



OSCT INDUSTRY OPERATIONALLY VALID DATA

Last 100 Data Points

REFERENCE SHORE A HARDNESS CHANGE OVERAL

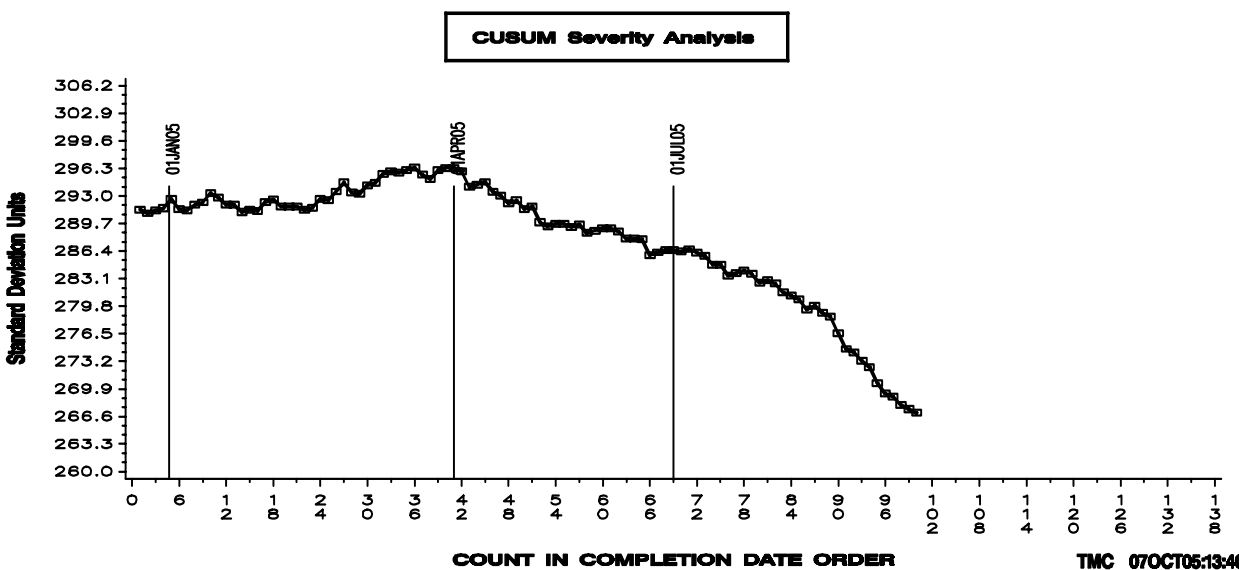
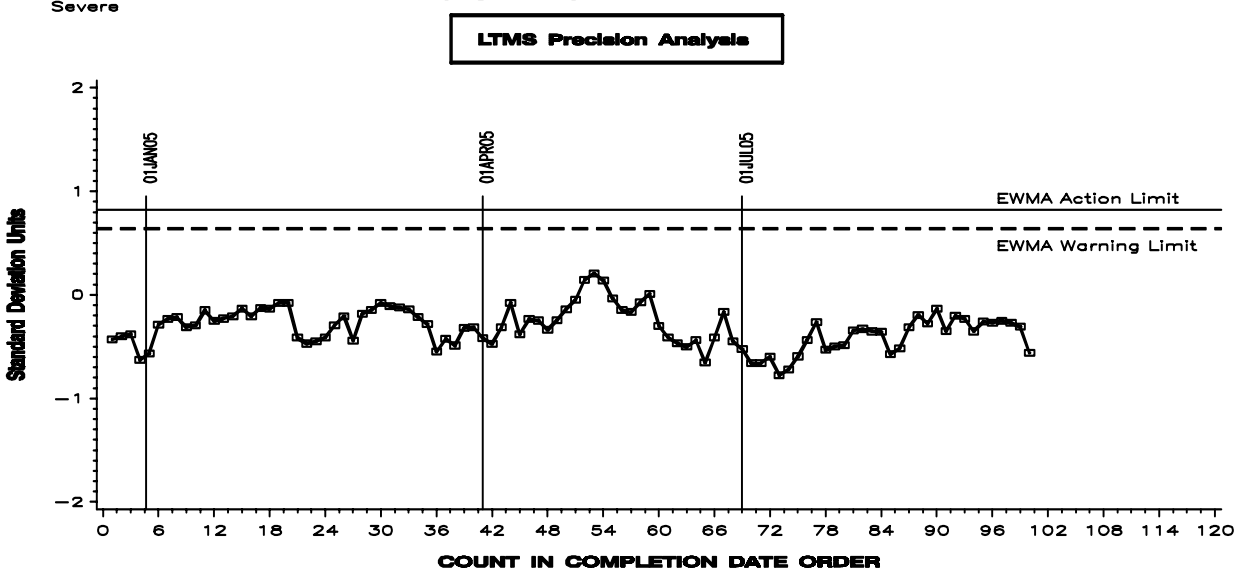
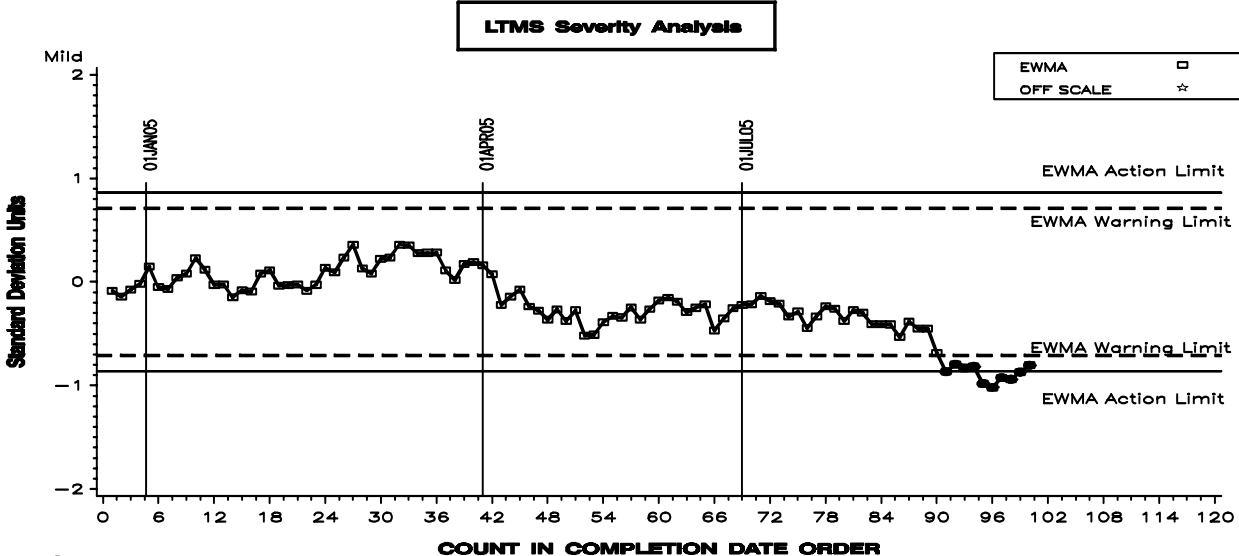


Figure 6

OSCT INDUSTRY OPERATIONALLY VALID DATA

Last 100 Data Points

REFERENCE PERCENT VOLUME CHANGE OVERALL

