



Test Monitoring Center

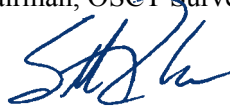
Carnegie Mellon University
6555 Penn Avenue, Pittsburgh, PA 15206, USA

<http://astmtmc.cmu.edu>
412-365-1000

MEMORANDUM: 12-021

DATE: June 13, 2012

TO: Don Bell, Chairman, OSCT Surveillance Panel

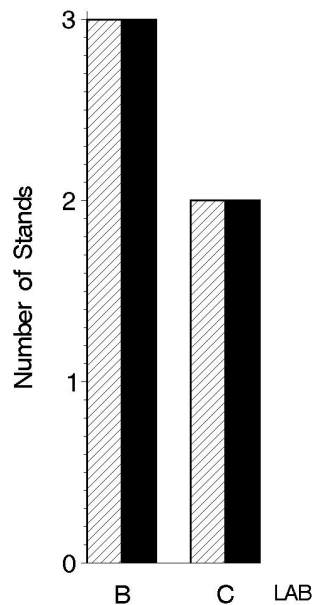
FROM: Scott Parke 

SUBJECT: OSCT Testing from October 1, 2011 through March 31, 2012

A total of 67 OSCT tests were reported to the Test Monitoring Center during the period from October 1, 2011 through March 31, 2012. Following is a summary of testing activity this period.

	Reporting Data
Number of Labs	2
Number of Stands	5

BY-LAB STAND
DISTRIBUTION

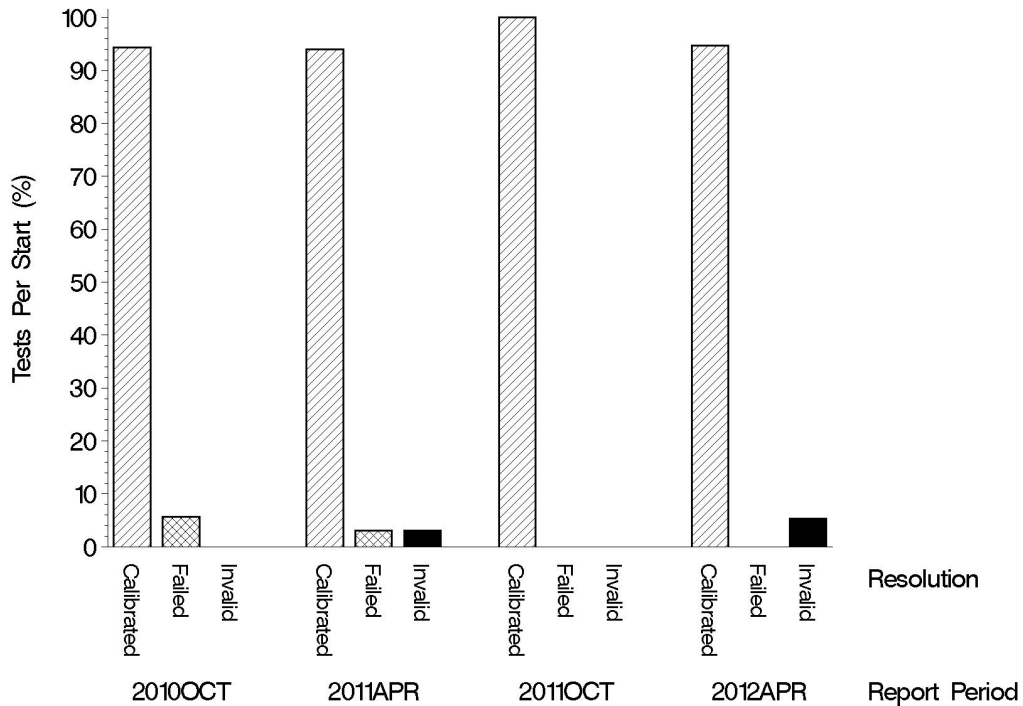


Report Period:  Current  Previous

Test Distribution by Oil and Validity

		FL	NI	PA	Totals	
					Last Period	This Period
Accepted for calibration	AC	14	13	9	42	36
Rejected (low result)	OC	0	0	0	0	0
Rejected (high result)	OC	0	0	0	0	0
Invalidated	LC	1	0	1	0	2
Aborted	XC	0	0	0	0	0
Elastomer or oil approval run	NI	9	10	10	53	29
Total		24	33	20	95	67

CALIBRATION ATTEMPT SUMMARY



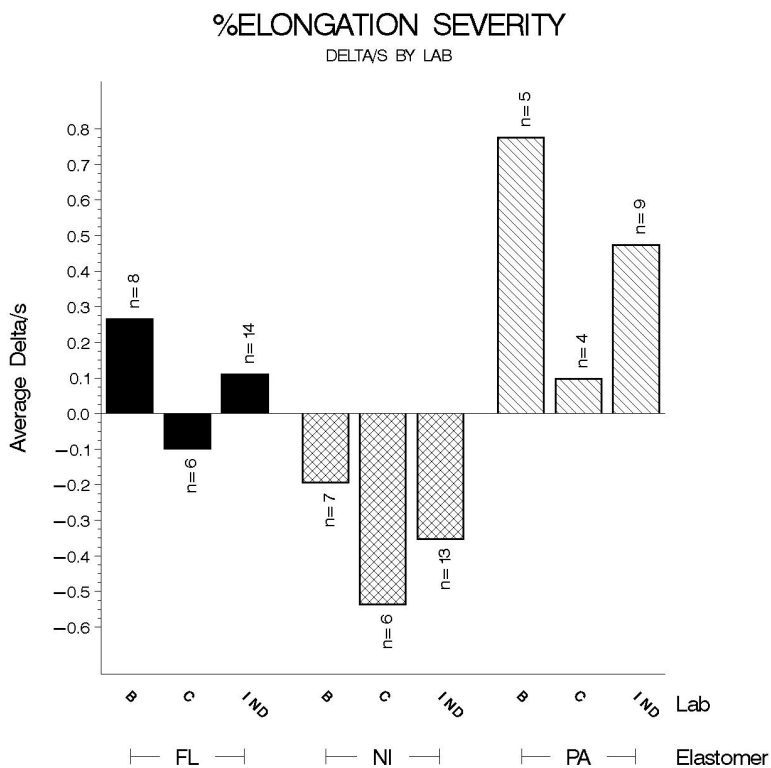
CAUSES FOR LOST TESTS:

Lab	Cause	Elastomer			Validity			Loss Rate		
		FL	NI	PA	LC	RC	XC	Lost	Starts	%
C	Lab ran incorrect oil.	●			●			1	34	3%
B	Oil volume failure.			●	●			1	33	3%
	Lost	1	0	1	2	0	0			
	Starts	24	23	20	67	67	67			
	%	4%	0%	5%	3%	0%	0%			

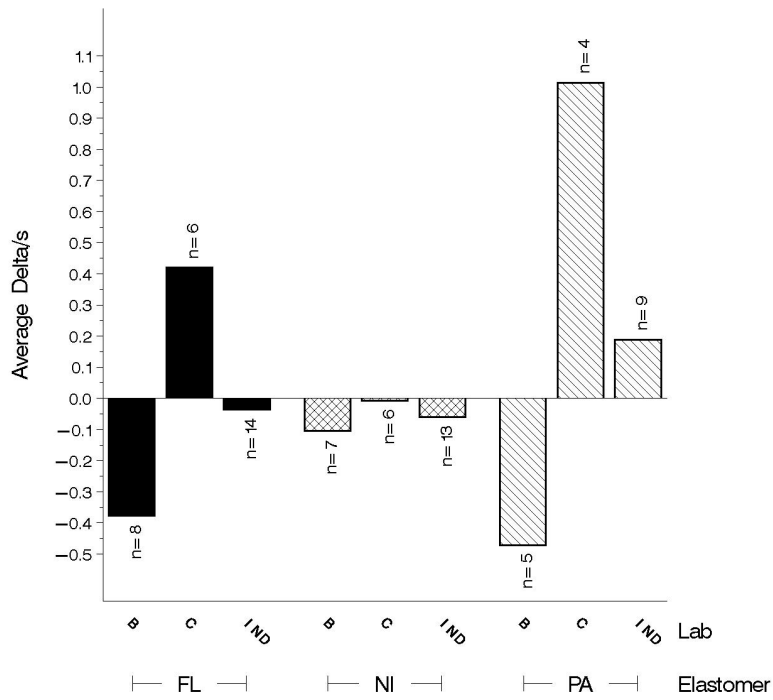
Lost tests are calibration attempts that were either aborted or operationally invalid.

Elastomer	Lab	n	Average Δ /s by Lab		
			PELA	PVCA	SAHA
FL	B	8	0.266	-0.377	-0.770
	C	6	-0.098	0.419	-0.166
	Industry	14	0.110	-0.036	-0.511
	Shift*	14	0.844	-0.020	-0.718
NI	B	7	-0.194	-0.105	0.217
	C	6	-0.537	-0.008	0.307
	Industry	13	-0.352	-0.060	0.259
	Shift*	13	-2.016	-0.038	0.355
PA	B	5	0.776	-0.471	0.027
	C	4	0.097	1.013	-0.442
	Industry	9	0.474	0.189	-0.181
	Shift*	9	10.558	0.297	-0.477

*as computed using historic pooled s

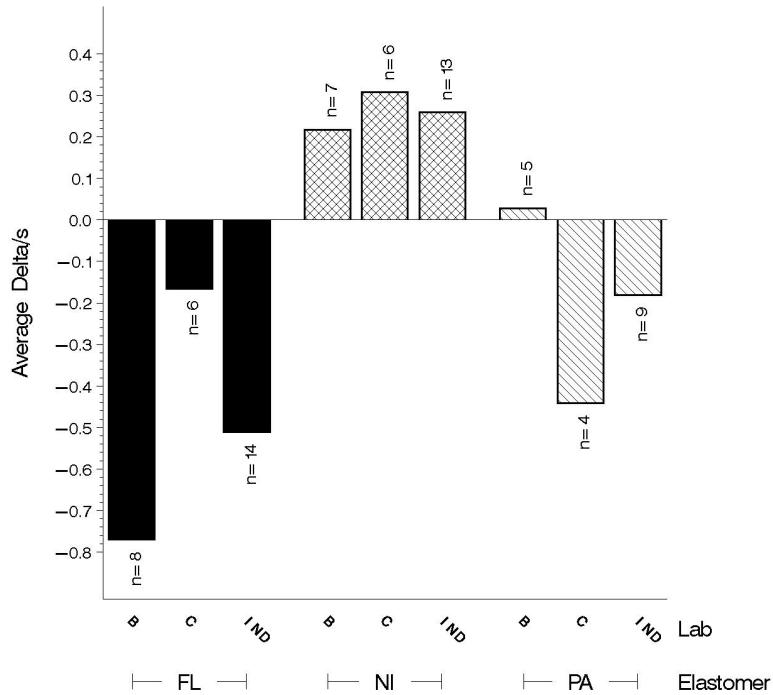


%VOLUME CHANGE SEVERITY DELTA/S BY LAB



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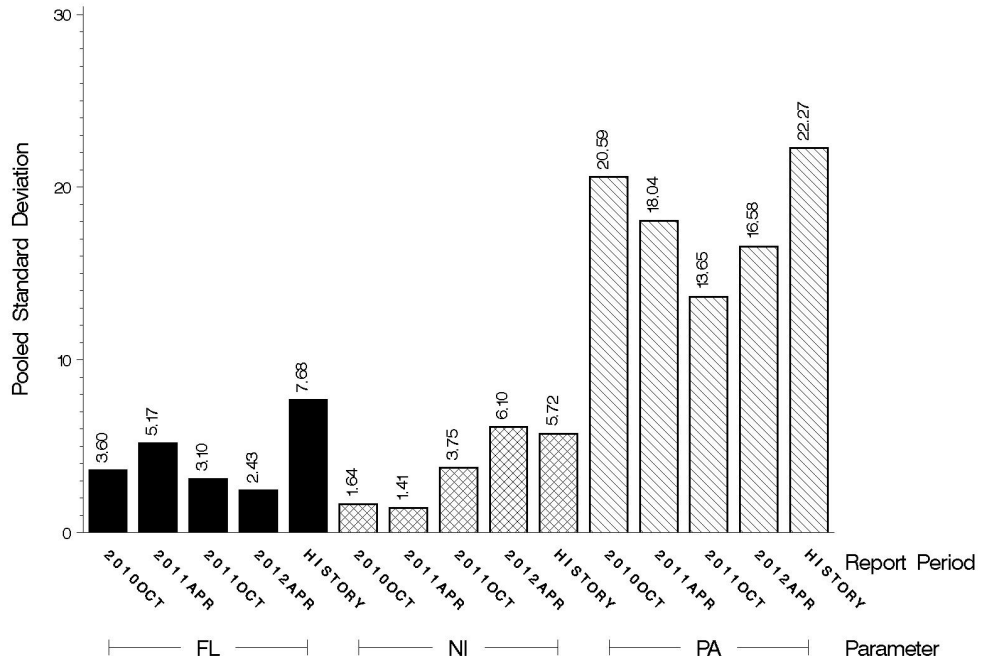
S.A. HARDNESS SEVERITY DELTA/S BY LAB



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%ELONGATION PRECISION

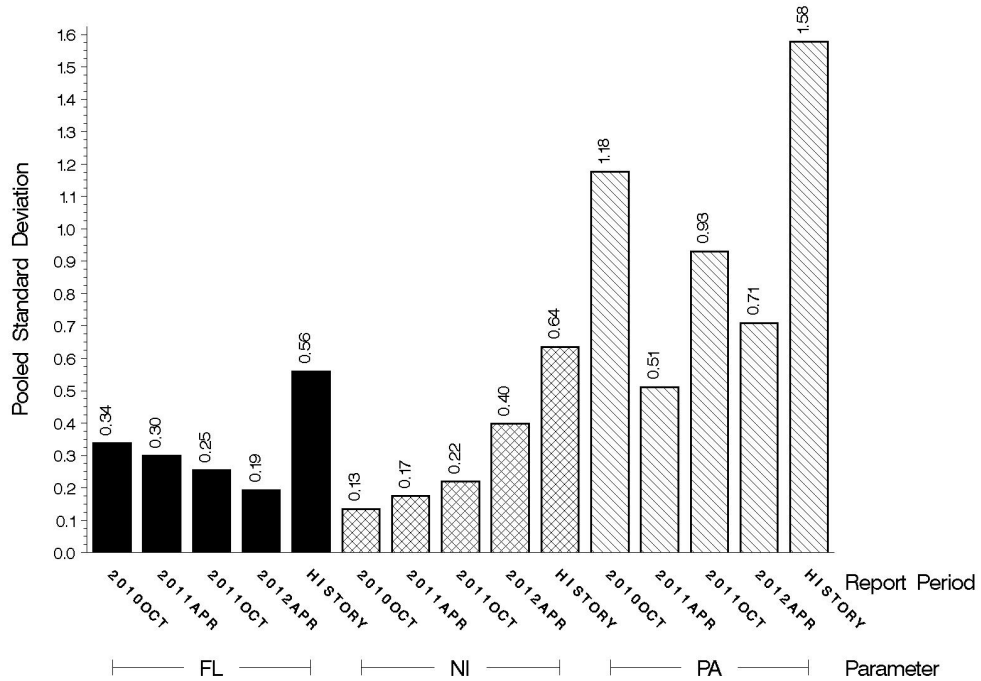
POOLED STANDARD DEVIATION
BY SIX-MONTH ASTM REPORT PERIOD



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%VOLUME CHANGE PRECISION

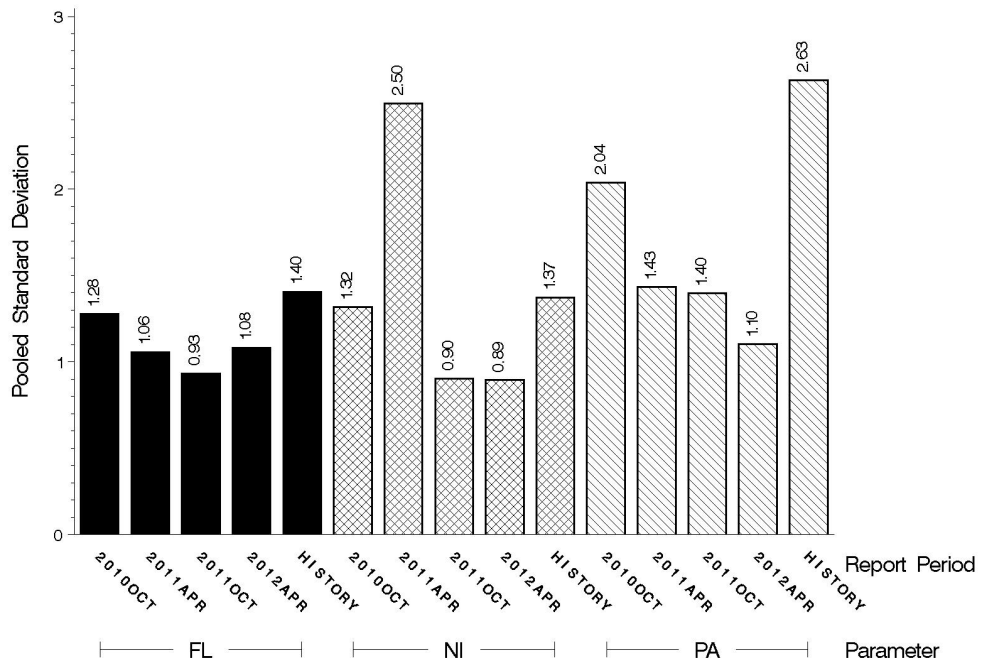
POOLED STANDARD DEVIATION
BY SIX-MONTH ASTM REPORT PERIOD



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S.A. HARDNESS PRECISION

POOLED STANDARD DEVIATION
BY SIX-MONTH ASTM REPORT PERIOD



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INDUSTRY CONTROL CHARTS:

The industry control charts are shown beginning on the following page. Following the standard industry charts are charts showing only the most recent 200 tests (to better show detail).

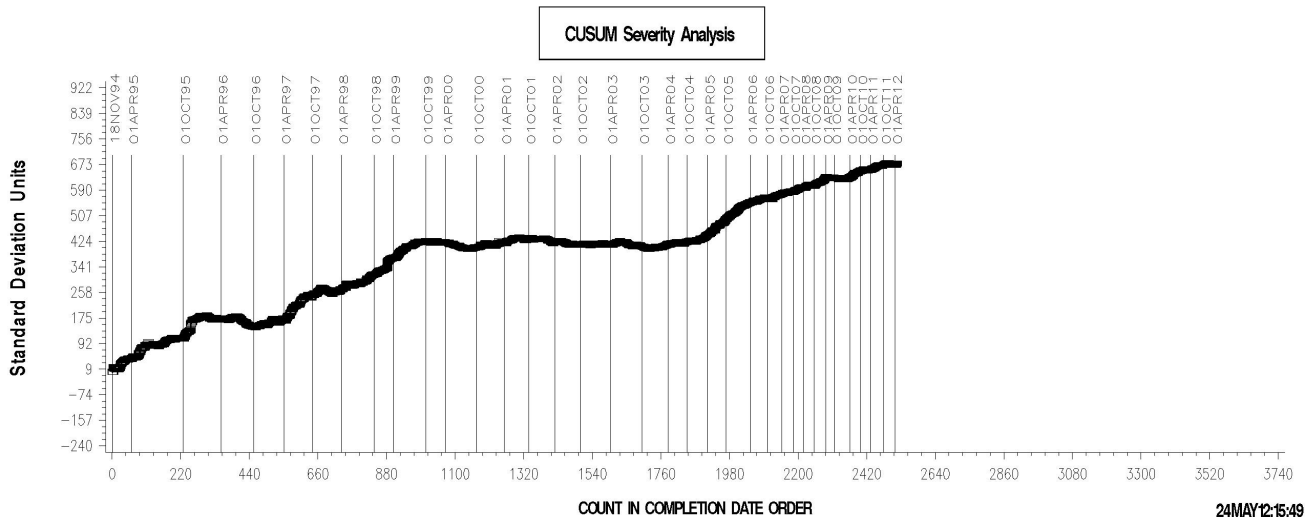
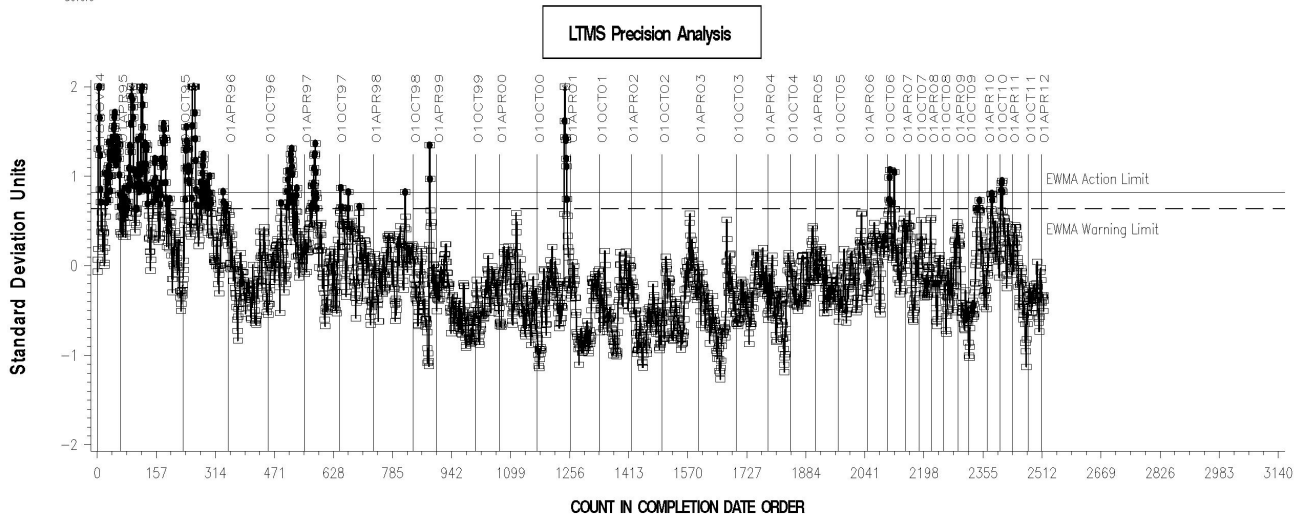
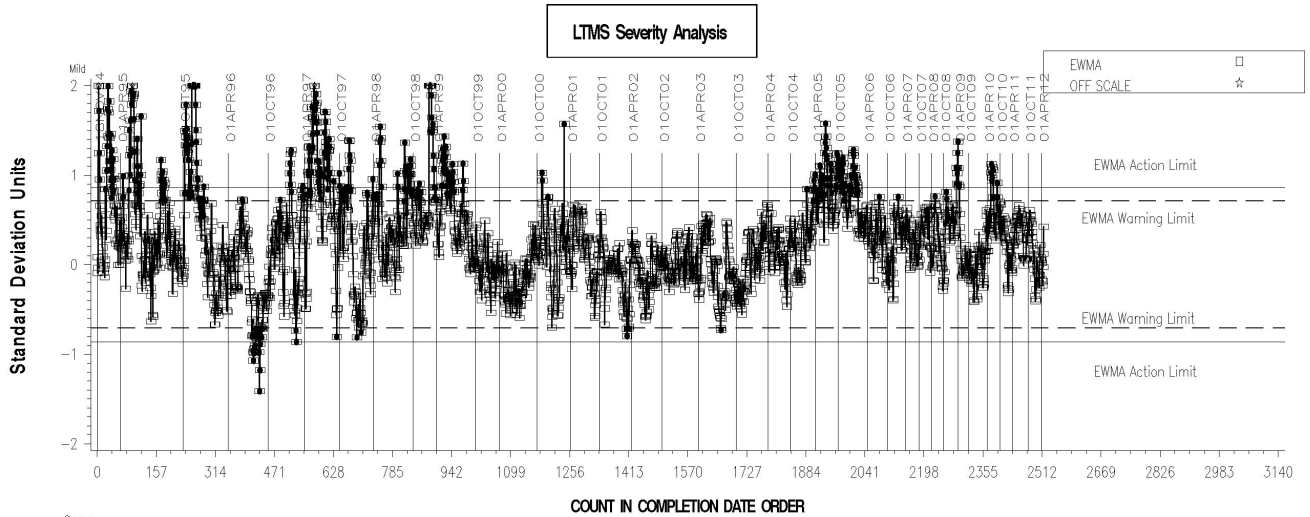
During this period, PELA, PVCA, and SAHA all remained within severity and precision limits.

Following the standard industry control charts is a page showing by-elastomer control charts for all three test parameters. Showing all the charts on the same page allows comparing the various parameter/elastomer combinations. The charts are small but are readable for the purpose of discerning overall performance trends. Two of the charts thus presented, polyacrylate PELA and fluoroelastomer PVCA, indicate long-standing off target performance. Polyacrylate PELA results are generally higher than target; fluoroelastomer PVCA results are generally lower. In 2011, the surveillance panel briefly discussed the appropriateness of industry correction factors for these two elastomer/parameter combinations but made no changes.

OSCT INDUSTRY OPERATIONALLY VALID DATA

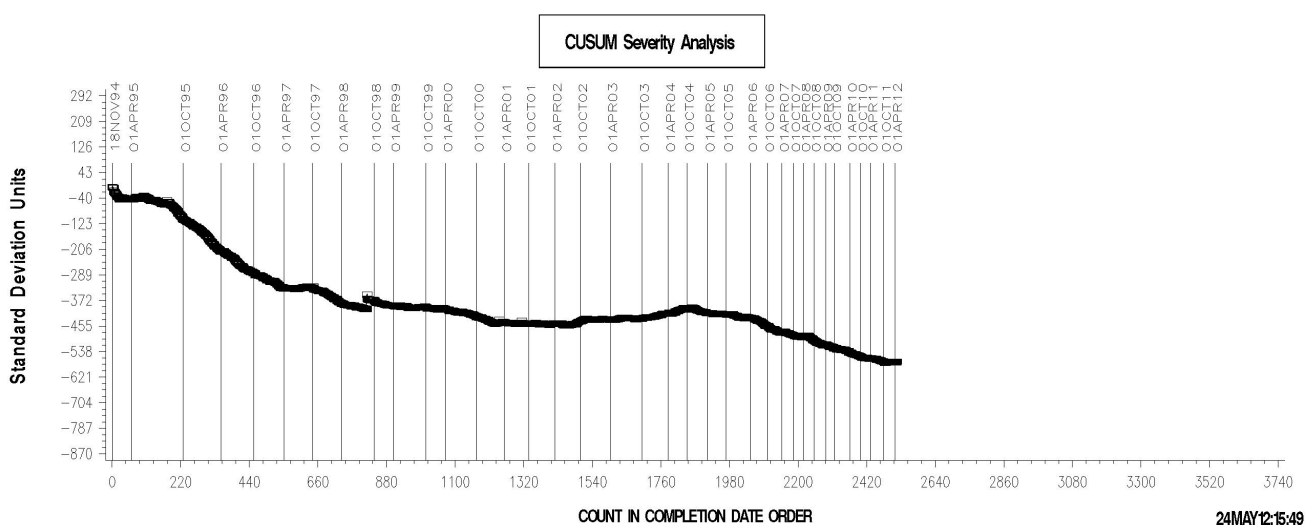
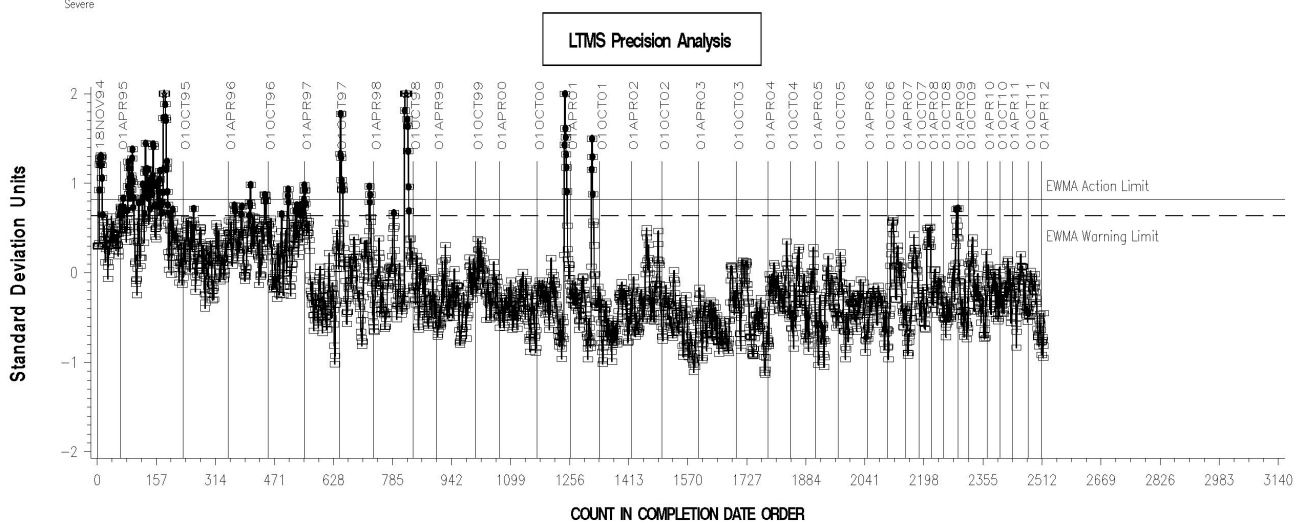
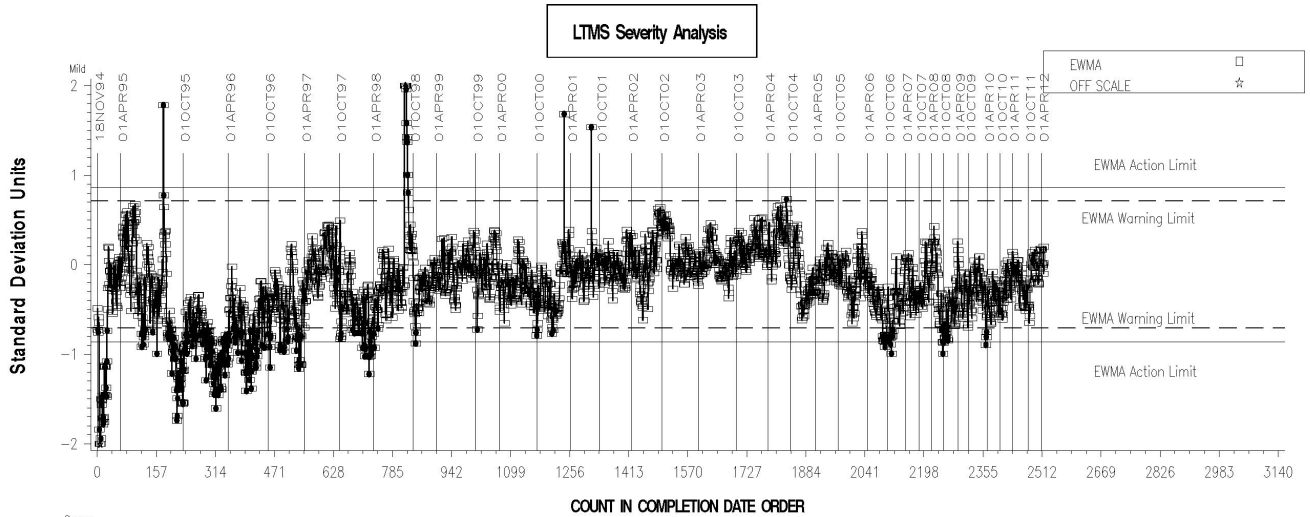


REF. ELONGATION CHANGE AVG.



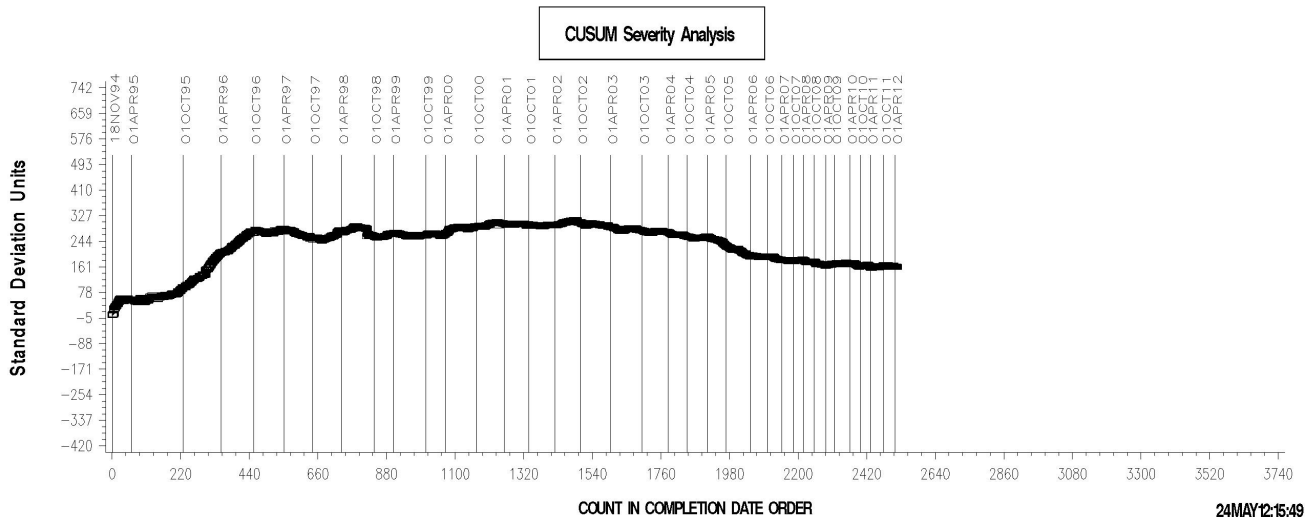
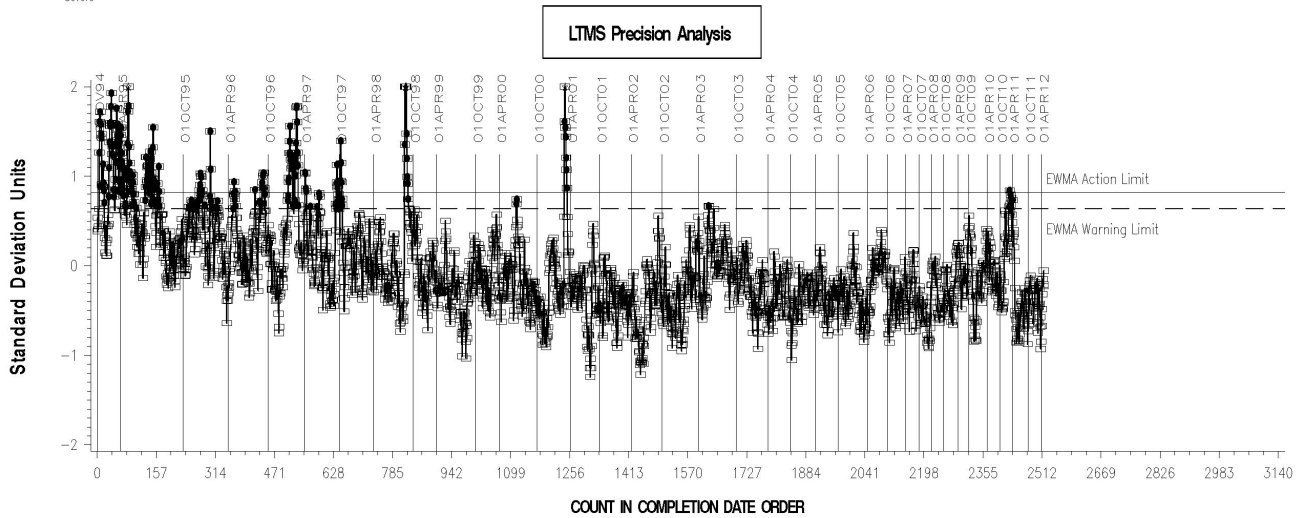
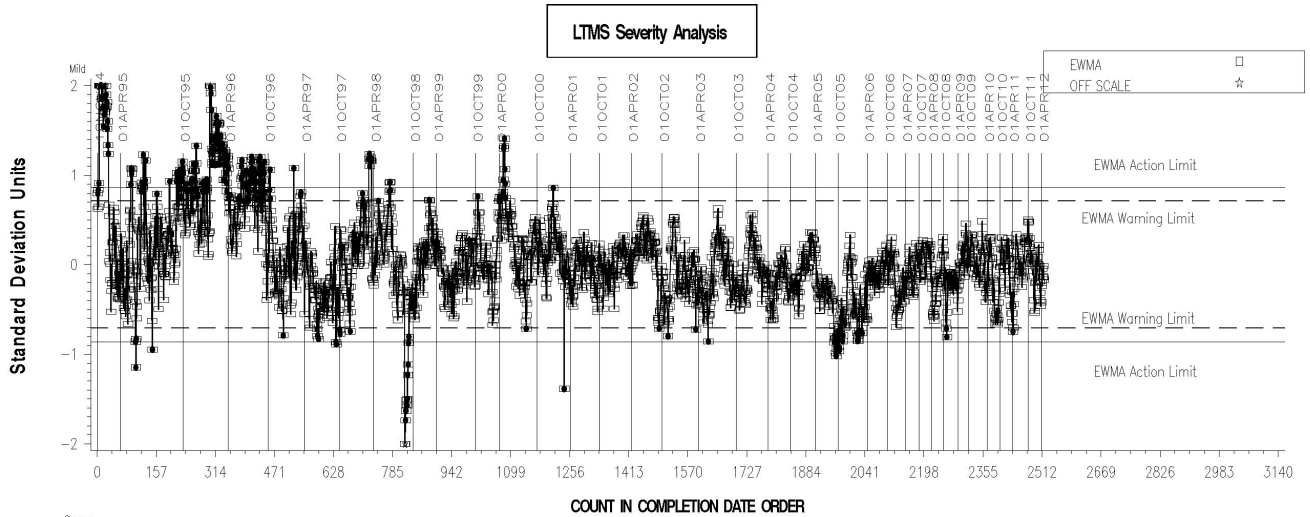
OSCT INDUSTRY OPERATIONALLY VALID DATA

REF. PERCENT VOLUME CHANGE AVG.



OSCT INDUSTRY OPERATIONALLY VALID DATA

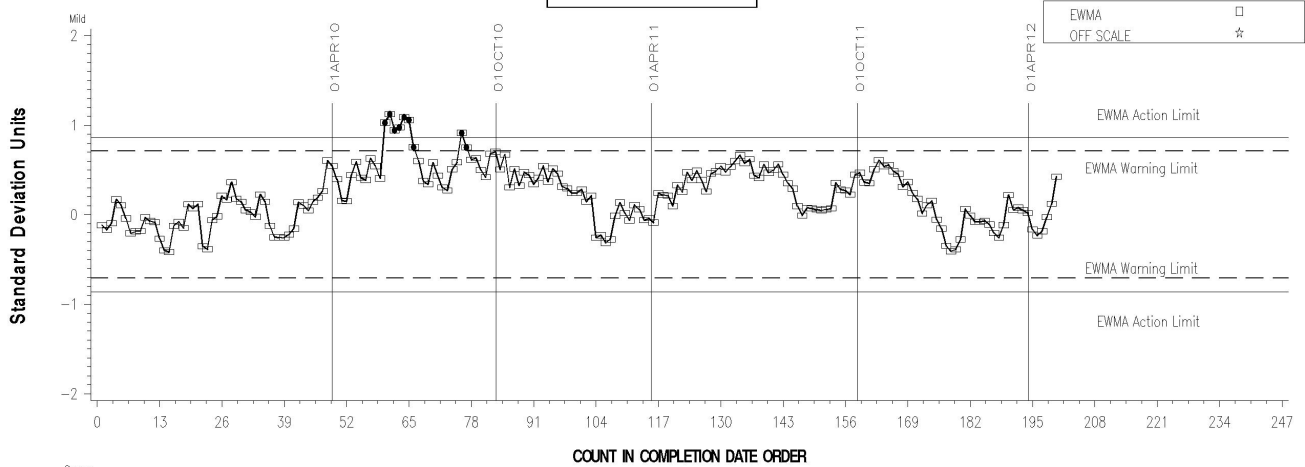
REF. SHORE A HARDNESS CHANGE AVG.



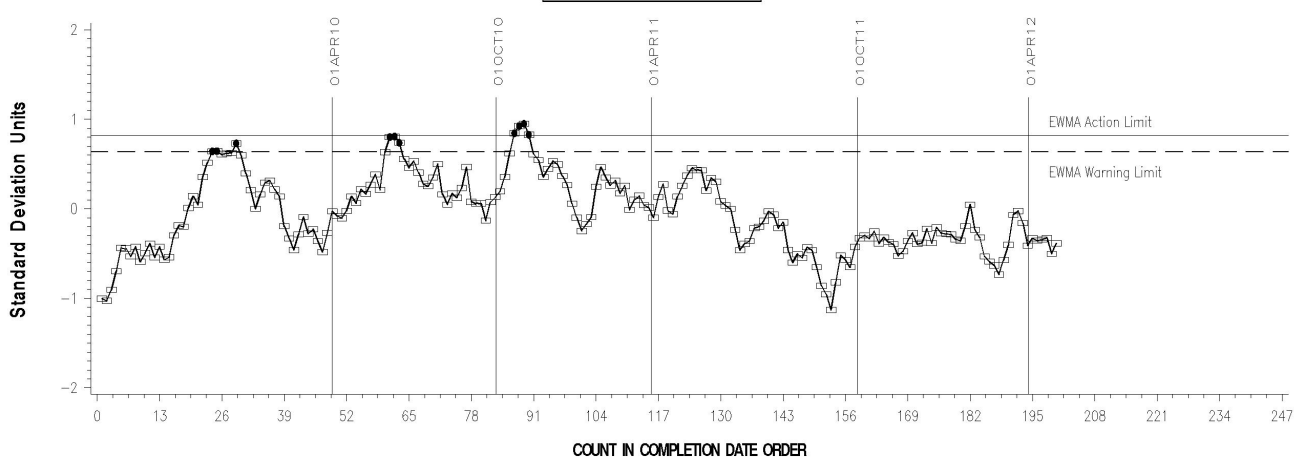
OSCT INDUSTRY OPERATIONALLY VALID DATA
200 Most Recent Tests
REF. ELONGATION CHANGE AVG.



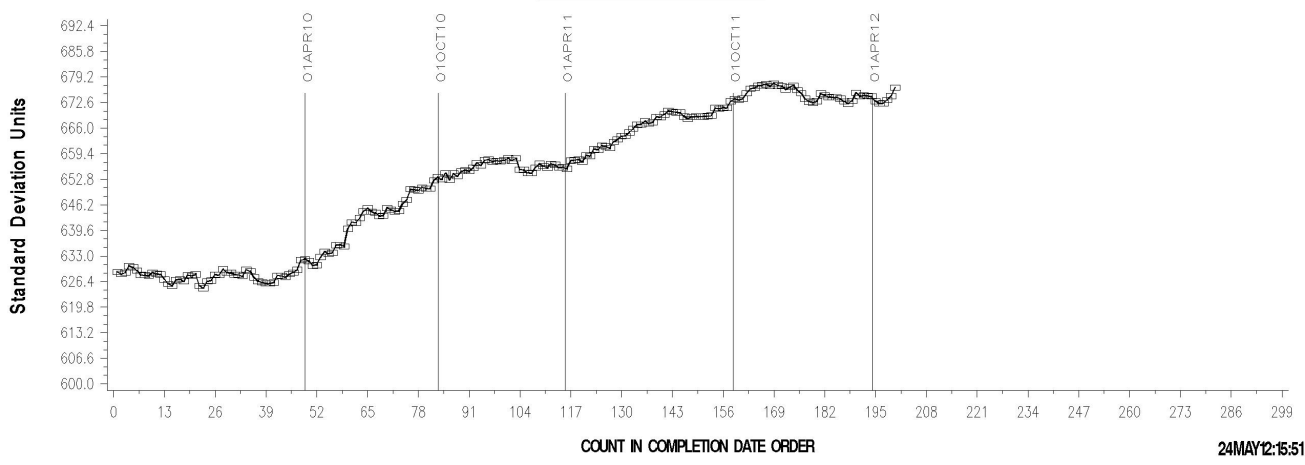
LTMS Severity Analysis



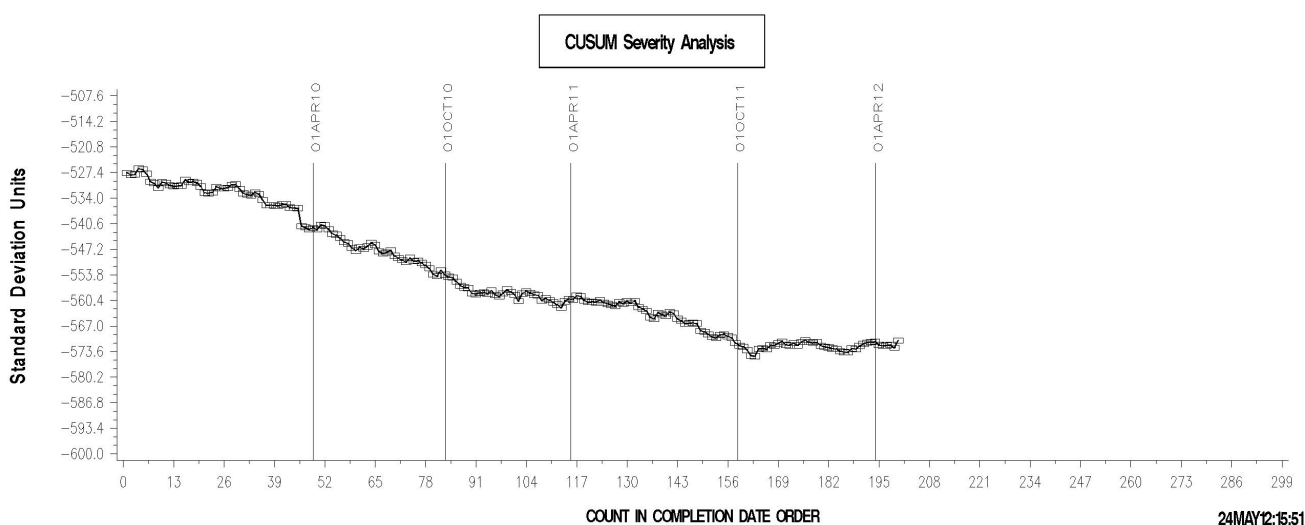
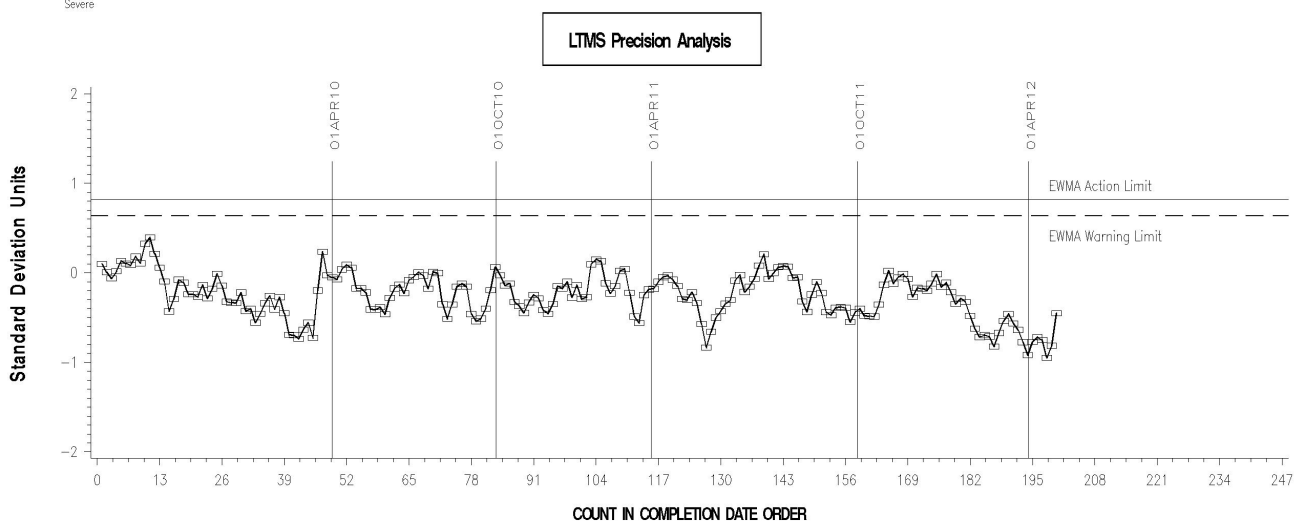
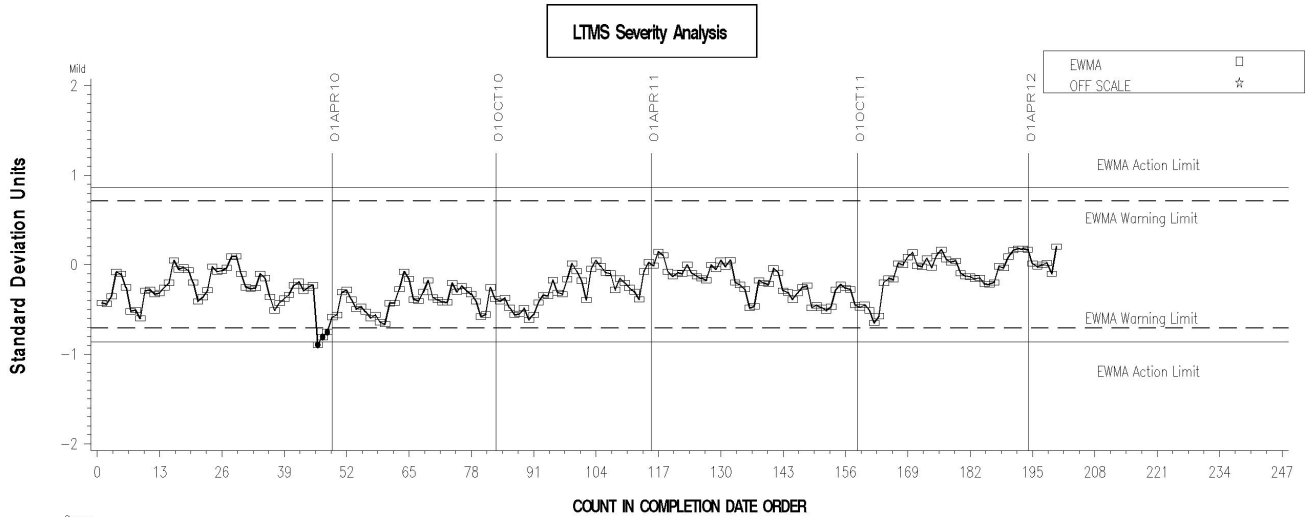
LTMS Precision Analysis



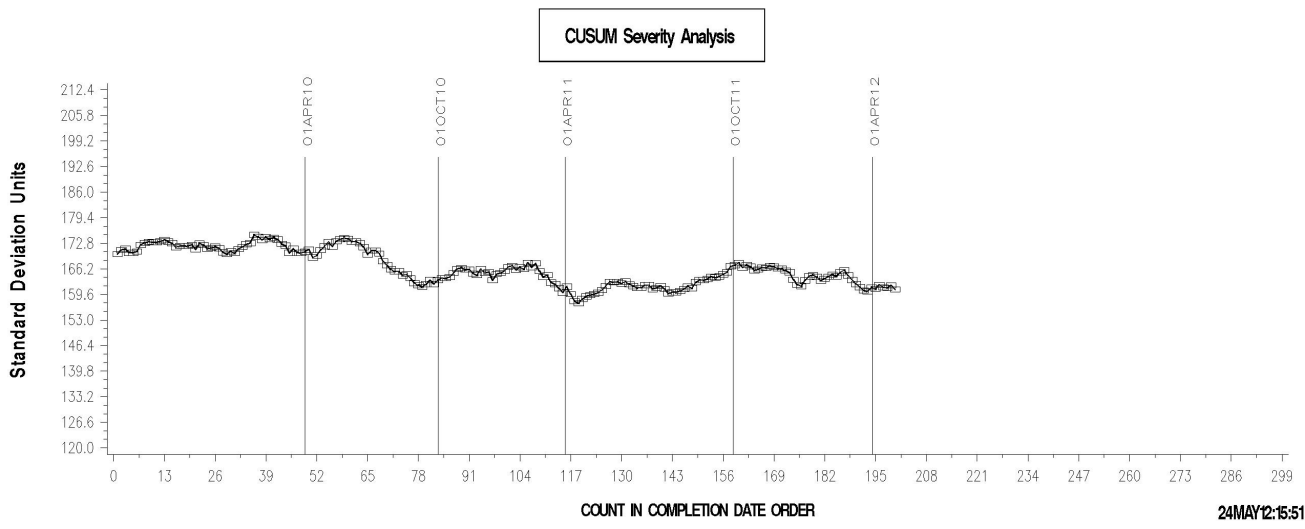
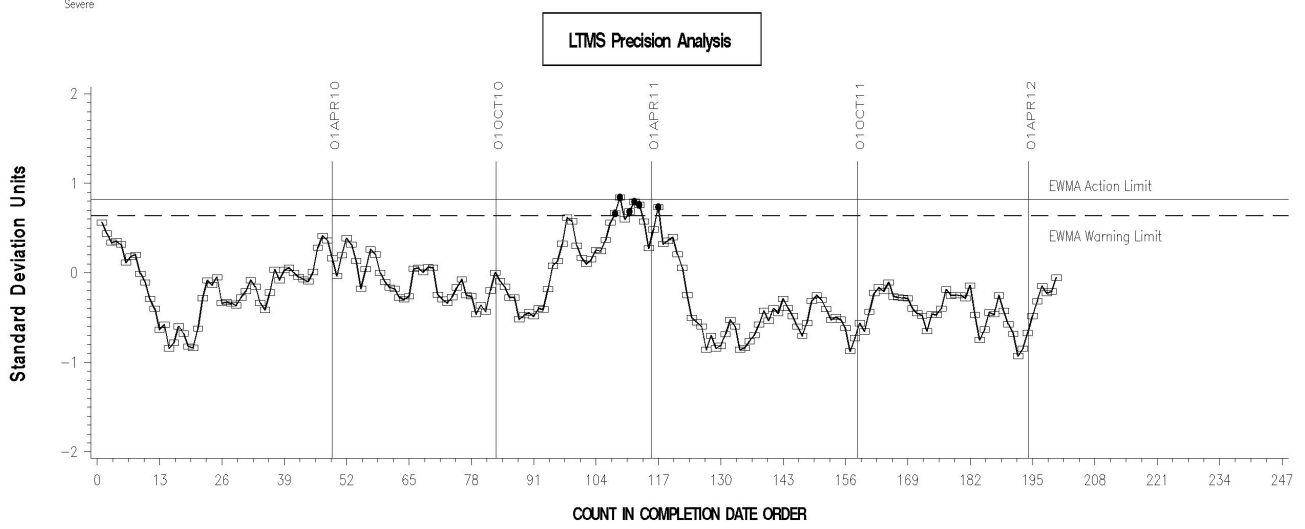
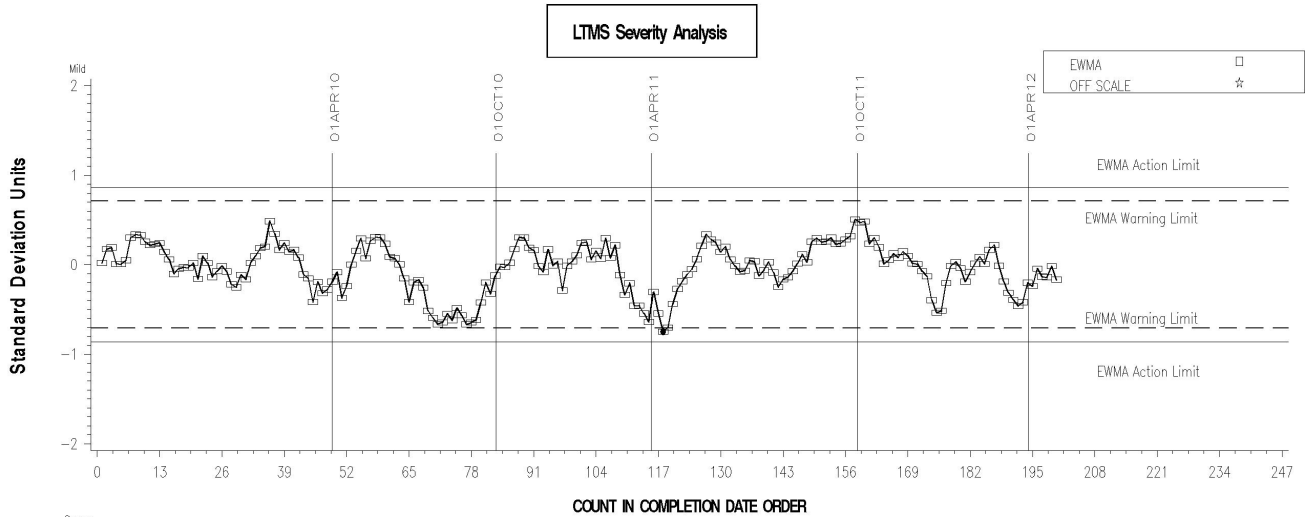
CUSUM Severity Analysis



OSCT INDUSTRY OPERATIONALLY VALID DATA
200 Most Recent Tests
REF. PERCENT VOLUME CHANGE AVG.



OSCT INDUSTRY OPERATIONALLY VALID DATA
200 Most Recent Tests
REF. SHORE A HARDNESS CHANGE AVG.



TIMELINE OF SIGNIFICANT EVENTS IN THE HISTORY OF THE OSCT TEST:

Effective Date	Information Letter	Event
	98-3	Section 5.2.4 Editorial Correction
19970324	97-1	Elastomer requirements for testing a non-reference oil.
19970701	97-2	Specimen cleaning procedure
19971201	97-3	Data dictionary and report forms revision
19980122	98-2	Backlash Settings Clarification
19980504	98-1	Seal Elastomer Shelf Life
19980504	98-1	Revised Reference Oil and Non-reference Oil Requirements
19980504	98-1	Addition of Calibration Requirements for Hardness Durometer, Balance, and Tension Testing Machine
20040930		Implemented LTMS Reference Oil Targets
20050815	05-1	Updated Test Precision
20050815	05-1	Rounding Test Results Using ASTM E 29
20051102	05-2	Initial and Final Volume Measurements
20060327	06-1	Addition of a Calibration Procedure for the Tension Testing Machine
20060327	06-1	New Reference Oil Testing Section
20060327	06-1	Editorial Changes
20060331	06-2	Specimen Spacer Width Revision
20071001	07-1	Test Temperature Data Logging an Tolerance
20080114	07-2	Percent Deviation Calculation for Test Oil Temperature Data Logging
20081007		Extend Nitrile elastomer batch NI332 shelf life from 10/10/2008 to 12/31/2008
20081007	08-1	Clarification of allowable oil temperature variations
20081007	08-2	Allow elastomer shelf life to extend beyond two years
20090904	09-1	Revised Extensometer Calibration Procedure
20110901	11-1	Removal of requirement to mail paper final test report to TMC.
20120307		Oil 169 introduced as replacement for 161-1.

TMC LAB VISITS:

No OSCT lab visits were conducted during this report period.

INFORMATION LETTERS:

No OSCT information letters were issued this period.

STATUS OF REFERENCE OIL SUPPLY:

At the end of this report period, the testing oil supply stood as outlined in the table below:

Oil	Cans @ Labs	@ TMC	
		Cans	Gallons
160-1	46	372	73.7
161-1	4	0	0.0
168	33	93	18.5
169	24	1279	253.6
Total	107	1744	345.8

Oil 161-1 has been depleted from TMC inventory. A reblend is not available. Oil 169 has been introduced as a replacement. Oil 168 is not reblendable.

SDP/sdp/mem12-021.sdp.docx

cc: Frank Farber

Jeff Clark

<ftp://ftp.astmtmc.cmu.edu/docs/gear/osct/semiannualreports/osct-04-2012.pdf>

Distribution: email