



Test Monitoring Center


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

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

MEMORANDUM: 16-010

DATE: May 3, 2016

TO: Don Bell, Chairman, OSCT Surveillance Panel

FROM: Scott Parke 

SUBJECT: OSCT Reference oil testing from October 1, 2015 through March 31, 2016

Please find attached a summary of reference oil testing activity this period.

SDP/sdp/mem16-010.sdp.doc

cc: Frank Farber

Jeff Clark

OSCT Surveillance Panel

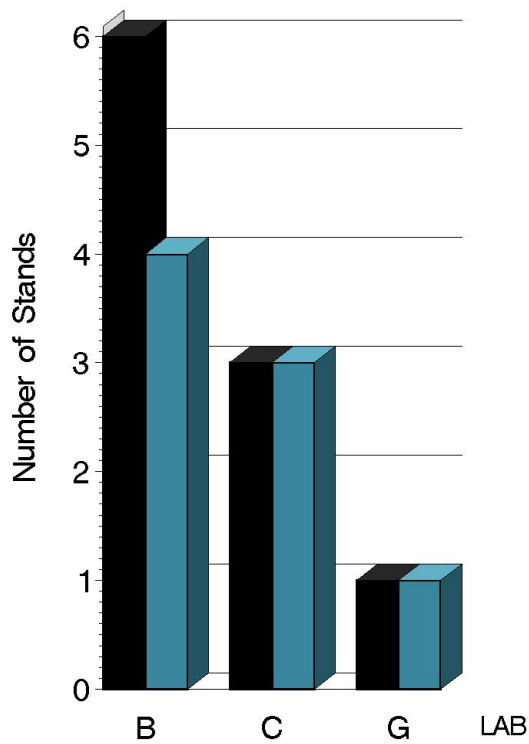
<ftp://ftp.astmtmc.cmu.edu/docs/gear/osct/semiannualreports/osct-04-2016.pdf>

Distribution: email

OSCT (D5662)

	Reporting Data	Calibrated on 3-31-2016
Number of Labs	3	3
Number of Stands	8	8

BY-LAB STAND
DISTRIBUTION



Report Period: ■ Current ■ Previous

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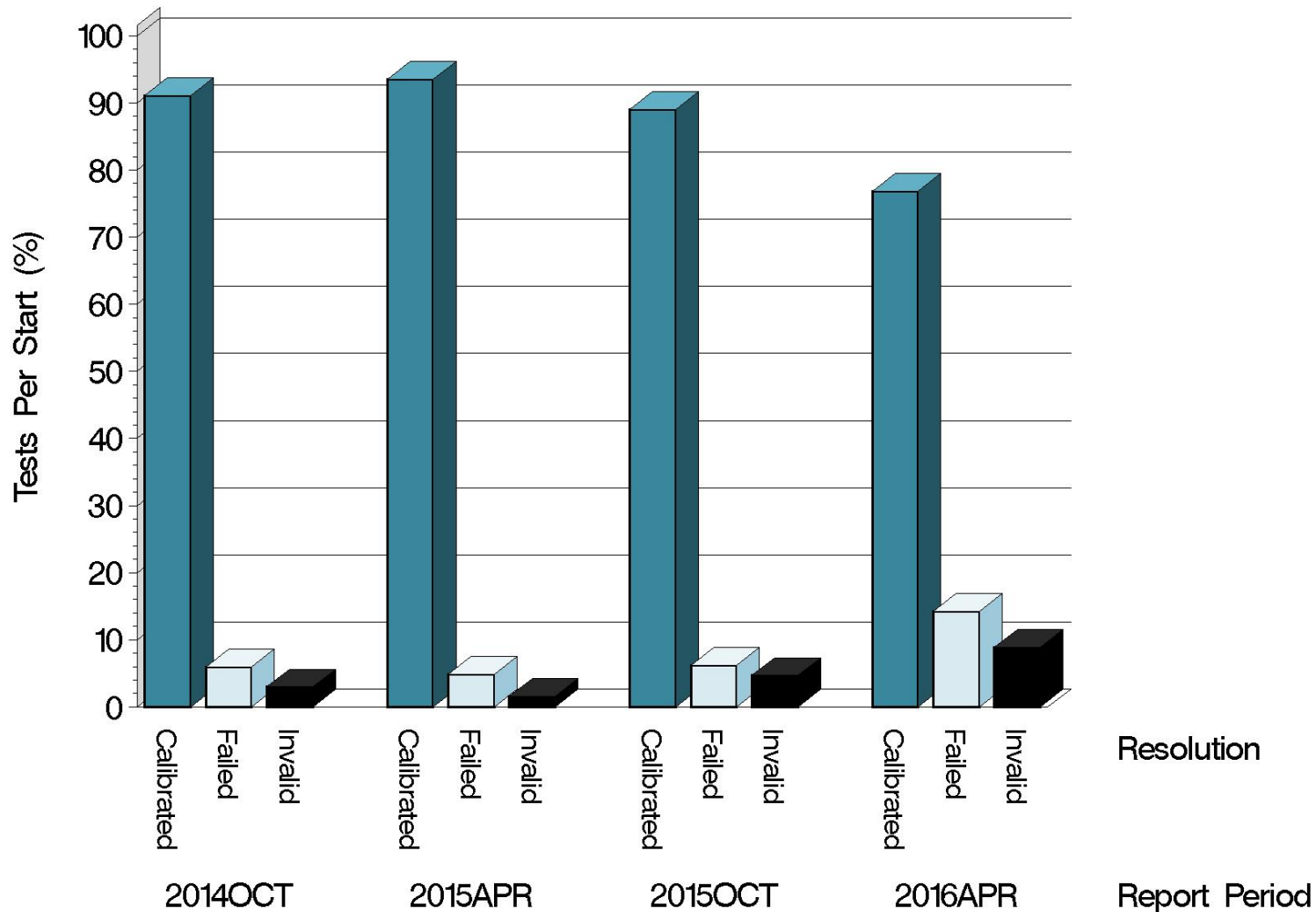
OSCT (D5662)

Test Distribution by Elastomer and Validity

					Totals	
					Last Period	This Period
		FL	NI	PA		
Accepted for calibration	AC	14	15	14	57	43
Rejected (low result)	OC	1	0	1	2	2
Rejected (high result)	OC	1	0	2	0	3
Rejected (combination)	OC	2	0	1	2	3
Invalidated by lab	LC	0	1	0	0	1
Invalidated	RC	0	1	1	2	2
Aborted	XC	1	1	0	0	2
Elastomer approval run	NI	7	15	9	20	31
Unacceptable approval run	MI	9	2	9	0	20
Total		35	35	37	83	107

OSCT (D5662)

CALIBRATION ATTEMPT SUMMARY



13:58:49 29APR2016

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CAUSES FOR LOST TESTS

Lab	Cause	Oil			Validity			Loss Rate		
		FL	NI	PA	LC	RC	XC	Lost	Starts	%
B	Wrong oil used.		●			●		2	50	4%
	Wrong oil used.			●		●				
C	Loss of temperature control.	●					●	3	39	8%
	Wrong elastomer run.		●		●					
	Wrong temperature run.		●				●			
Lost		1	3	1	1	2	2			
Starts		35	35	37	107	107	107			
%		3%	9%	3%	1%	2%	2%			

OSCT (D5662)

Average Δ /s by Lab

Elastomer	Lab	n	PELA	PVCA	SAHA
FL	B	9	1.829	0.565	-2.091
	C	6	-0.428	-0.095	-0.253
	G	3	-0.554	-0.420	-0.968
	Industry	18	0.680	0.181	-1.291
	Shift*	18	5.080%	0.097%	-1.782 pts.
NI	B	7	0.077	0.075	-0.443
	C	8	0.053	0.028	-0.413
	Industry	15	0.064	0.050	-0.427
	Shift*	15	0.348%	0.027%	-0.530 pts.
PA	B	7	-1.446	-1.096	1.877
	C	8	0.563	1.214	-0.281
	G	3	-0.407	-1.382	1.793
	Industry	18	-0.380	-0.117	0.904
	Shift*	18	-8.152%	-0.228%	2.288 pts.

*computed using historic pooled s

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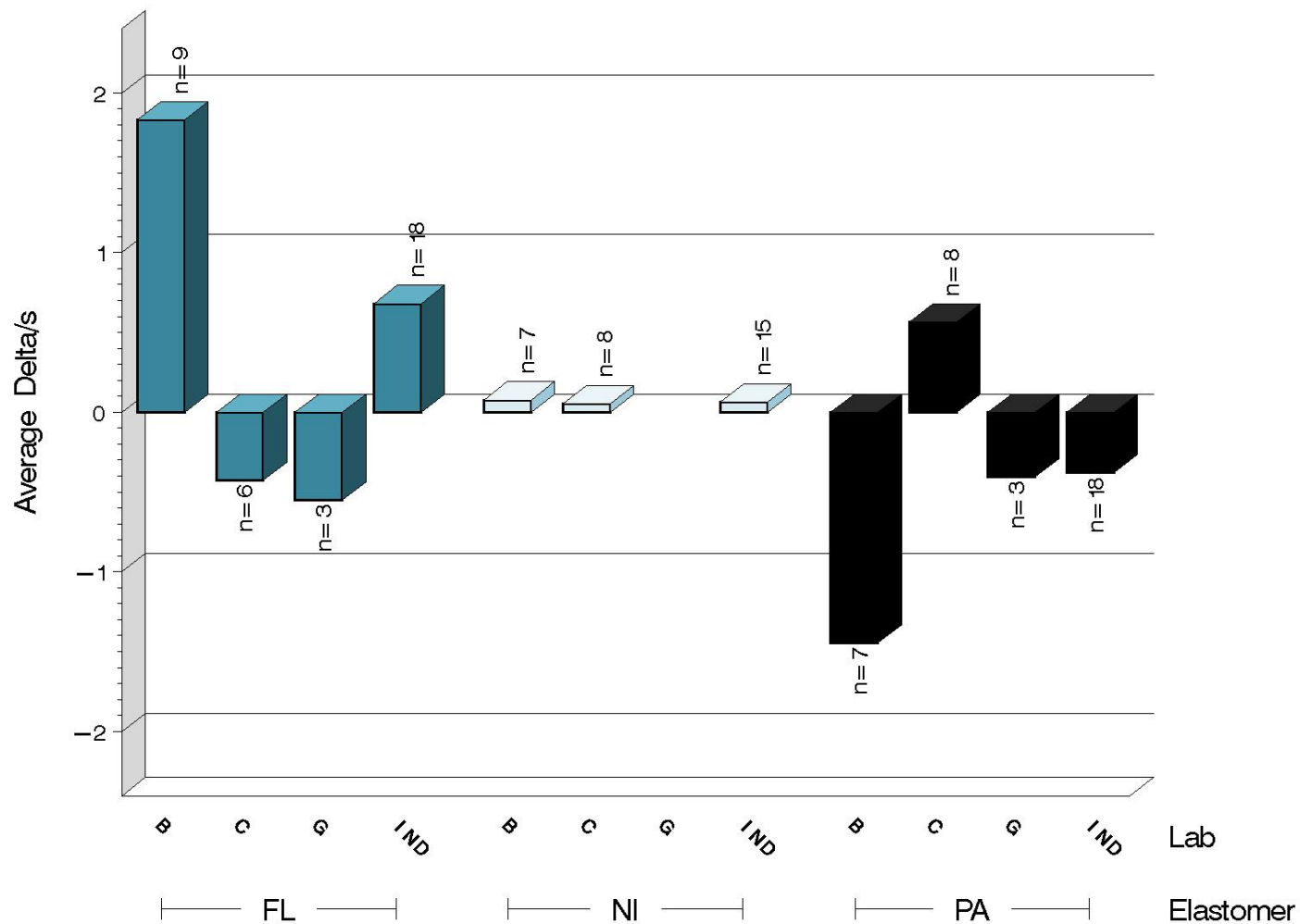


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OSCT (D5662)

%ELONGATION SEVERITY

DELTA/S BY LAB

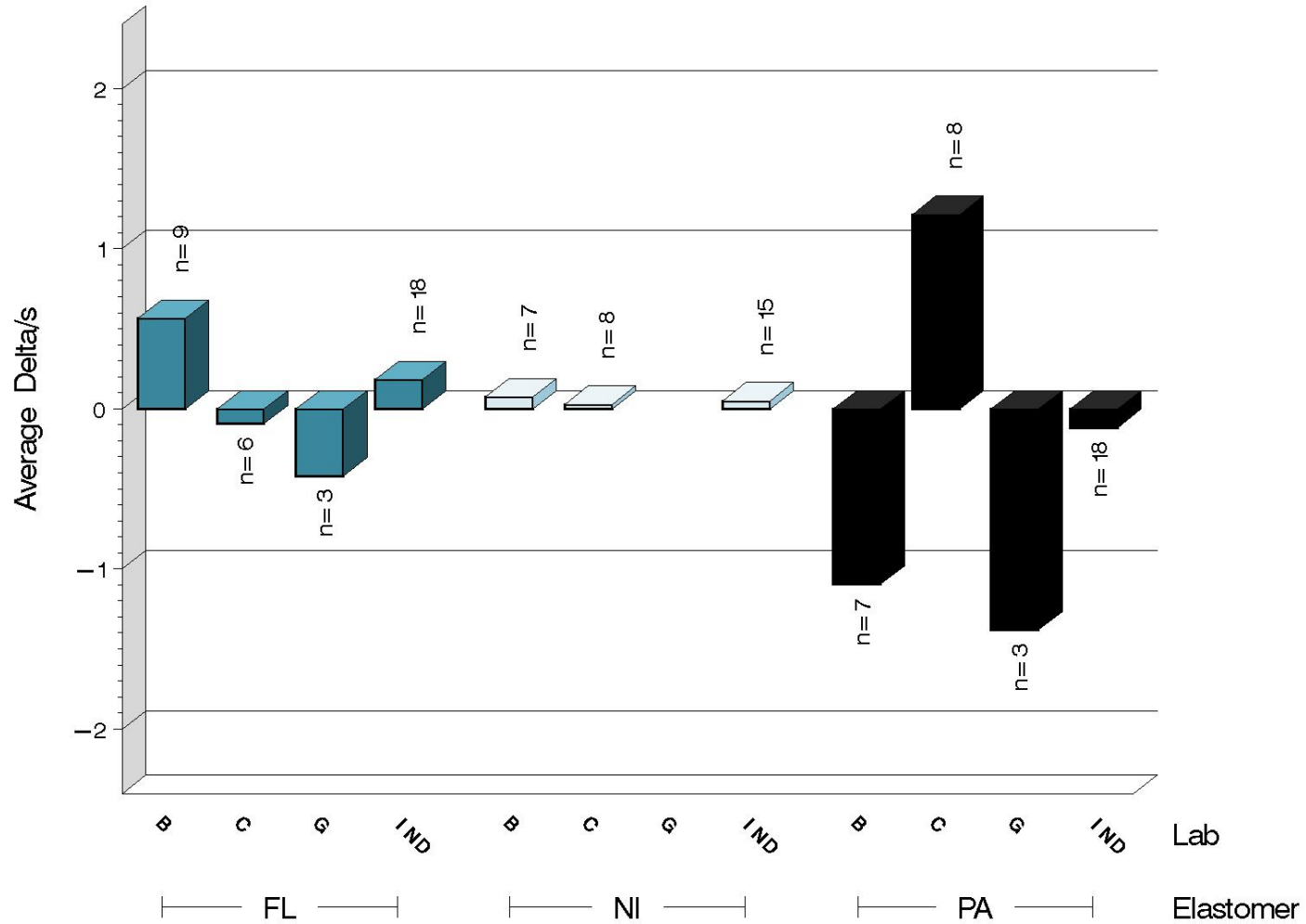


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OSCT (D5662)

%VOLUME CHANGE SEVERITY

DELTA/S BY LAB

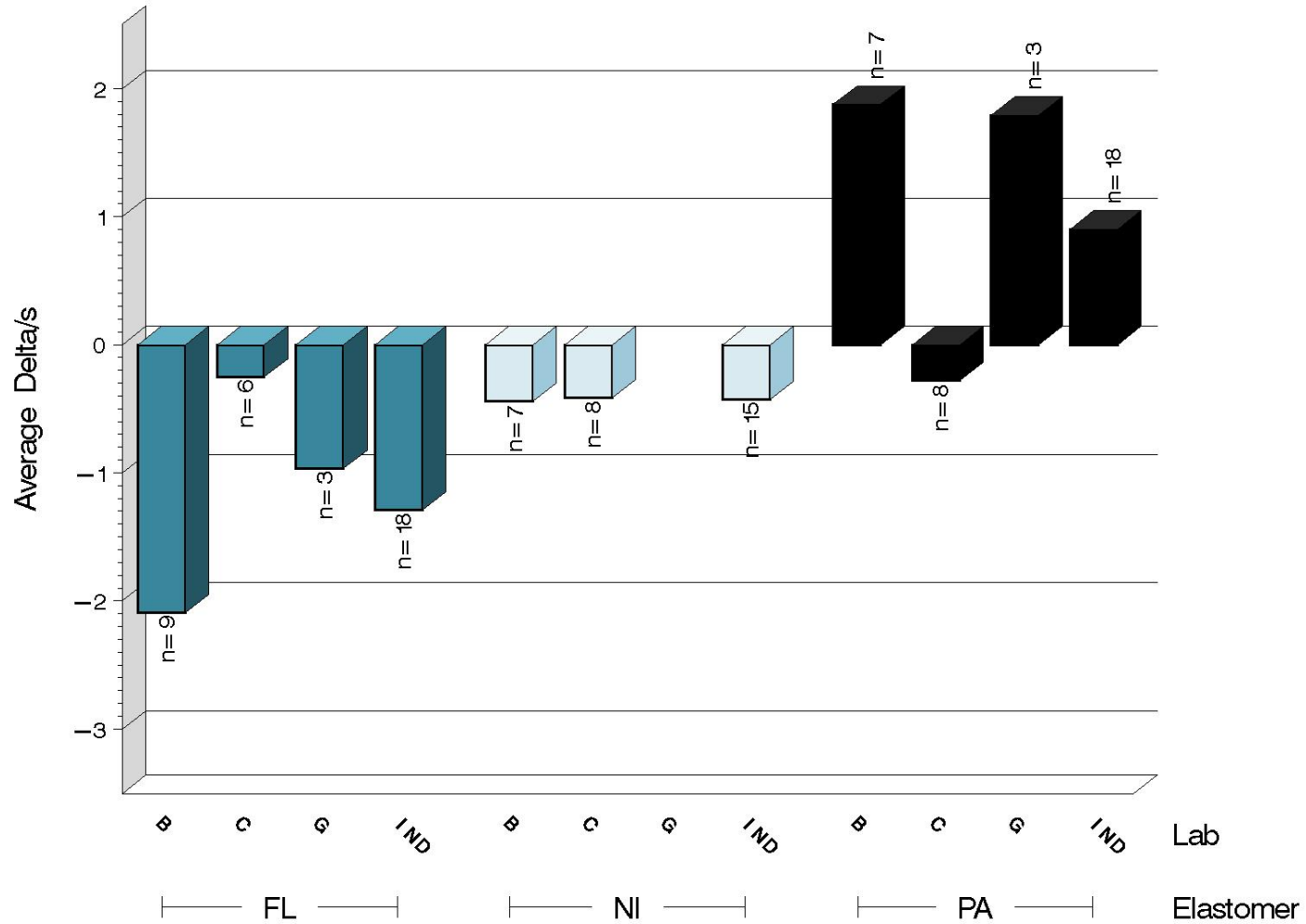


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OSCT (D5662)

S.A. HARDNESS SEVERITY

DELTA/S BY LAB

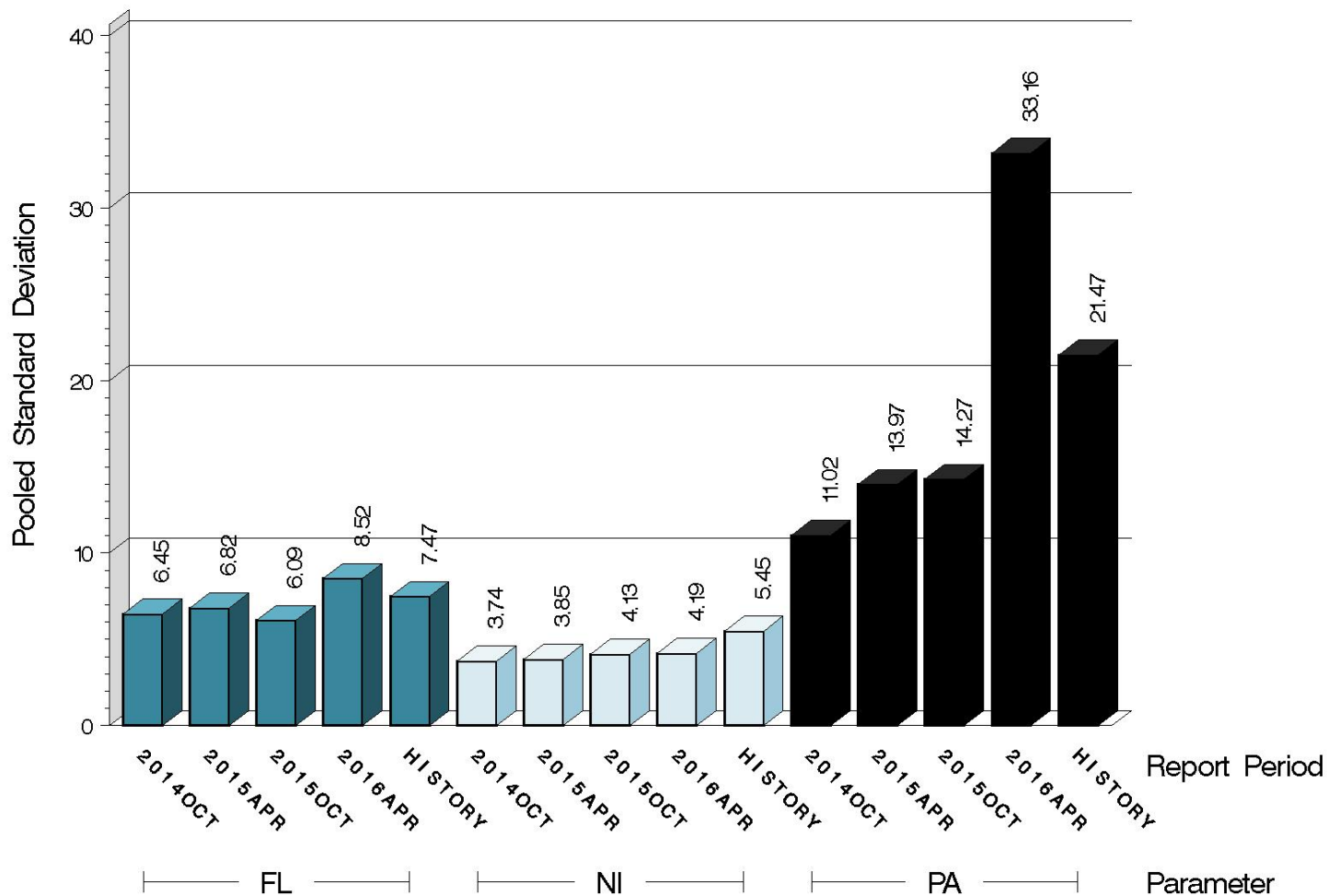


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OSCT (D5662)

%ELONGATION PRECISION

POOLED STANDARD DEVIATION
BY SIX-MONTH ASTM REPORT PERIOD

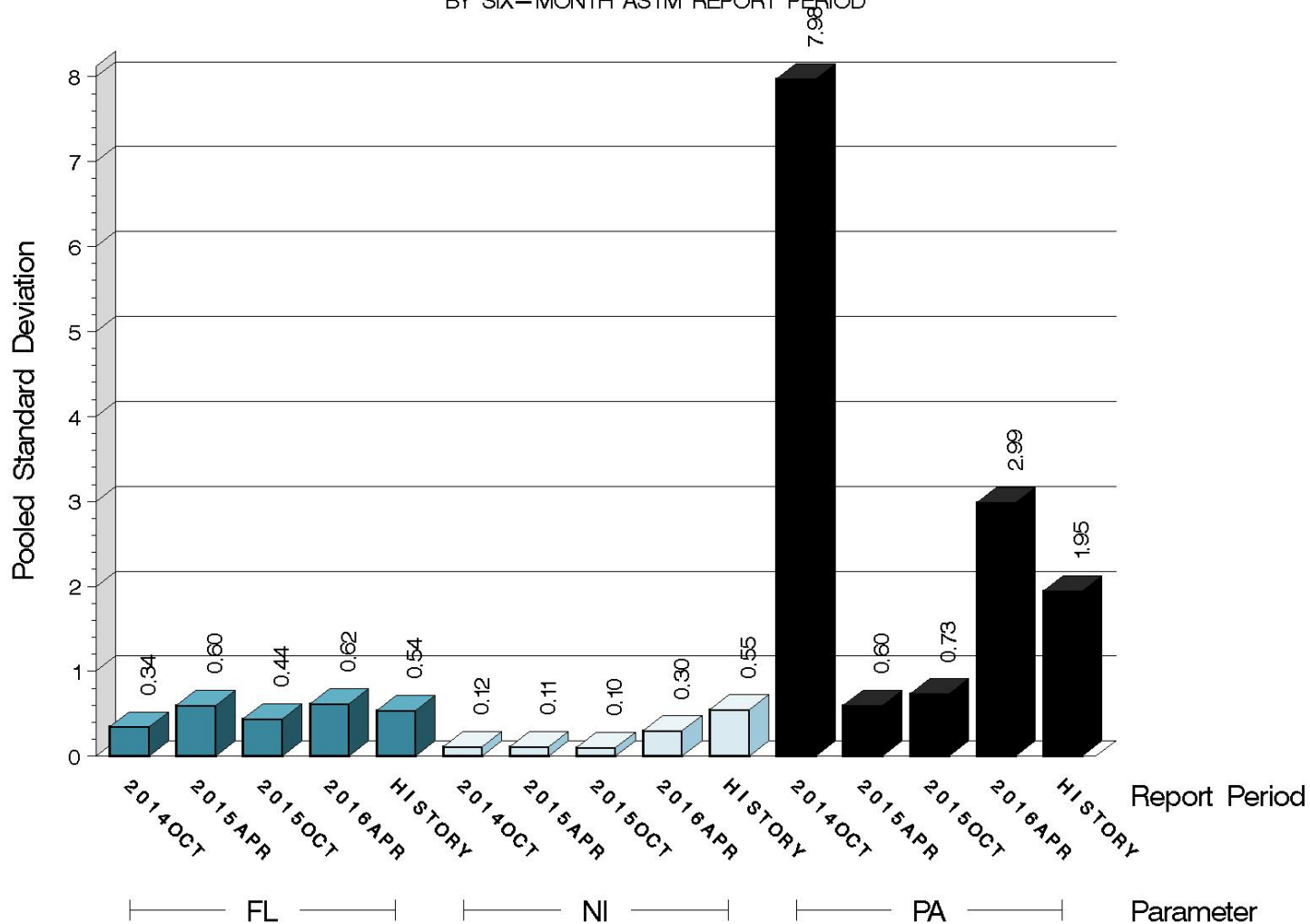


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OSCT (D5662)

%VOLUME CHANGE PRECISION

POOLED STANDARD DEVIATION
BY SIX-MONTH ASTM REPORT PERIOD

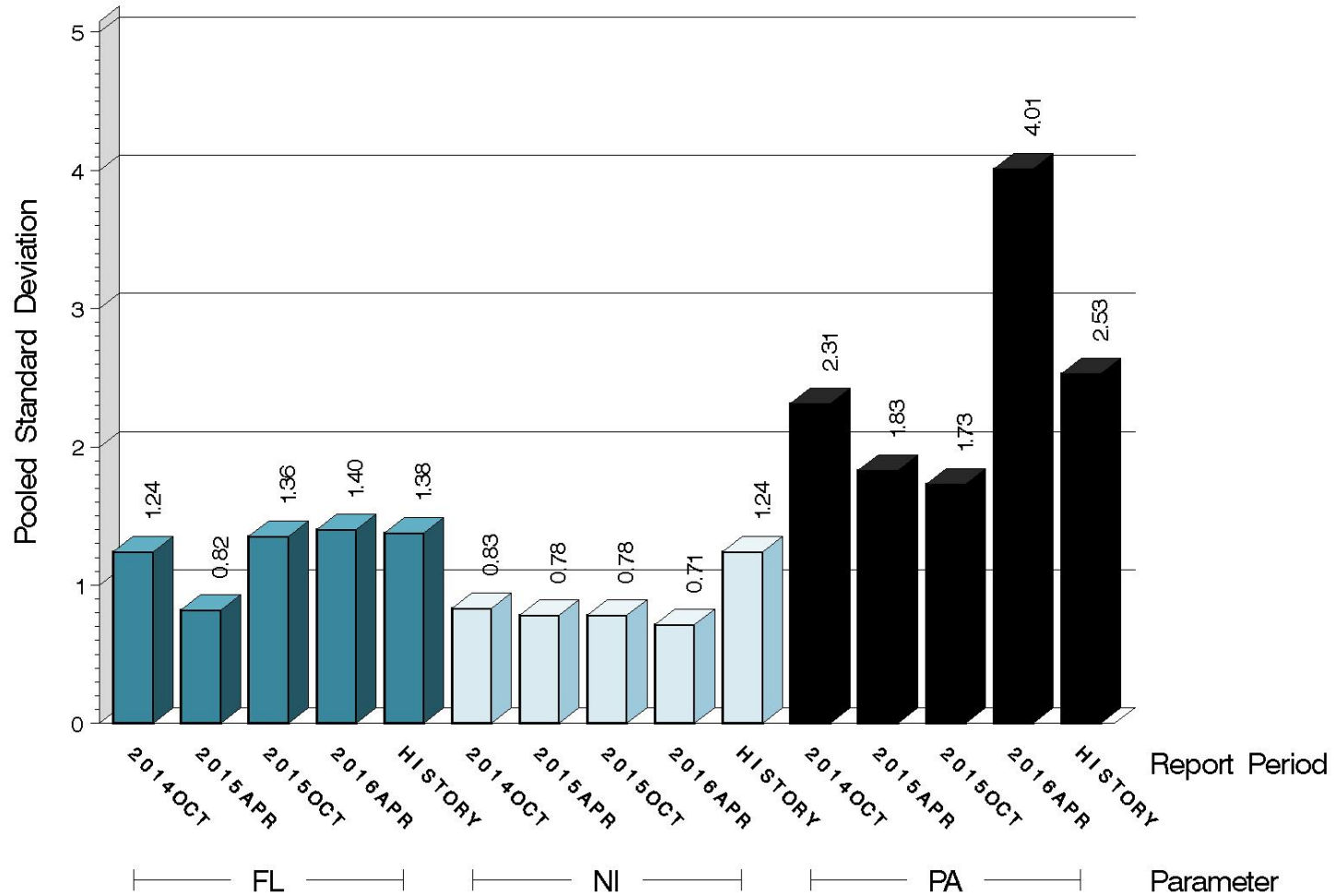


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OSCT (D5662)

S.A. HARDNESS PRECISION

POOLED STANDARD DEVIATION
BY SIX-MONTH ASTM REPORT PERIOD



13:53:49 29APR2016

OSCT (D5662)

SUMMARY OF SEVERITY & PRECISION

Severity

The combined-elastomer industry charts show severity for all parameters generally remained within limits over this report period.

However, the by-elastomer charts show that PELA results for fluoroelastomer continue to be above target this period while those for polyacrylate continue to be below. This is the explanation for the continuing PELA precision alarms. The by-elastomer charts also show SAHA performance below target for fluoroelastomer and above target for polyacrylate. Consequently, SAHA has had a number of precision alarms this period. Nitrile results for all parameters have remained within control chart limits.

Precision

As explained above, precision for PELA and SAHA produced a number of alarms this period. PVCA remained within limits.

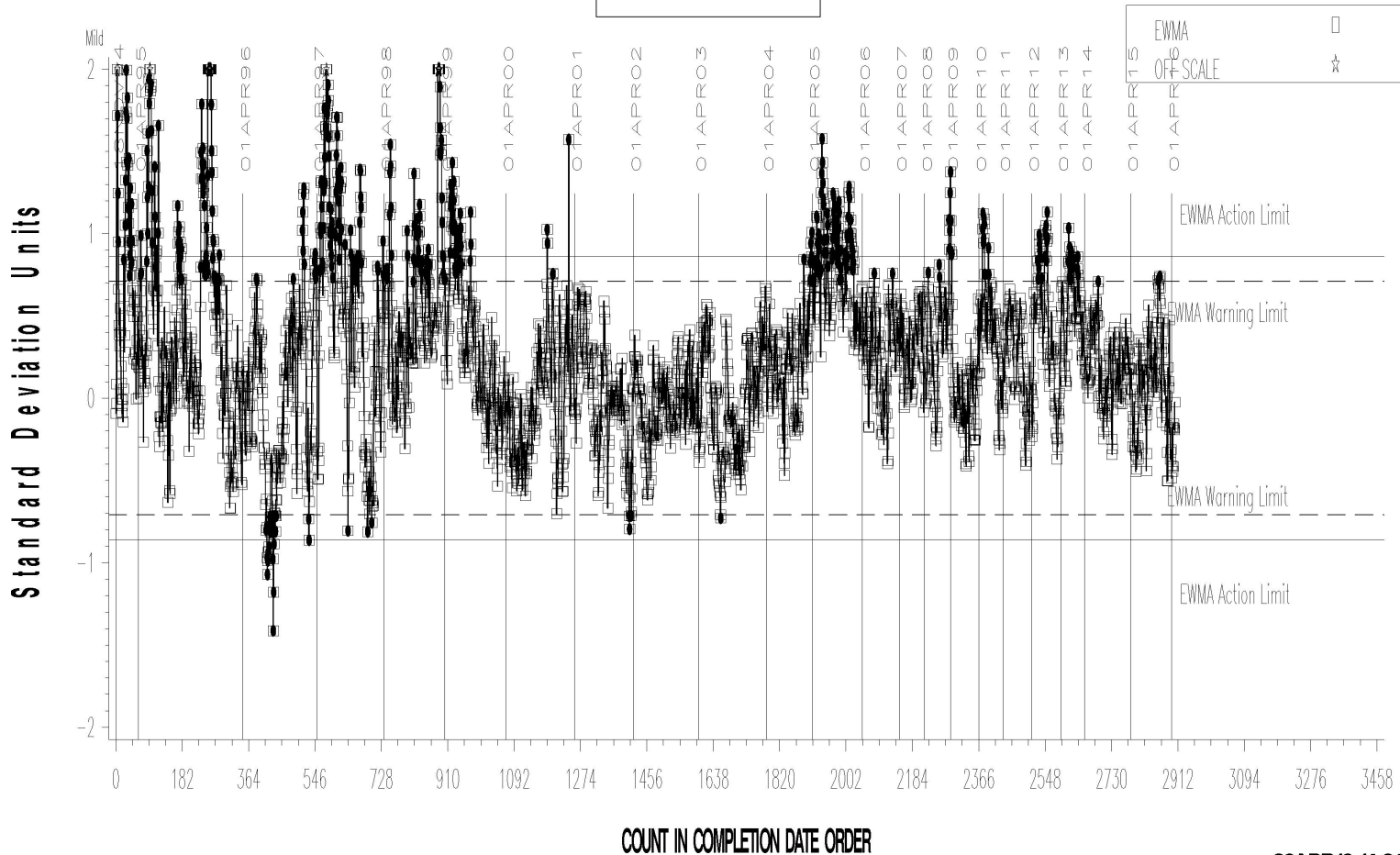
Industry control charts follow.

OSCT (D5662)

OSCT INDUSTRY OPERATIONALLY VALID DATA

REF. ELONGATION CHANGE AVG.

LTMS Severity Analysis



29APR16: 14:04

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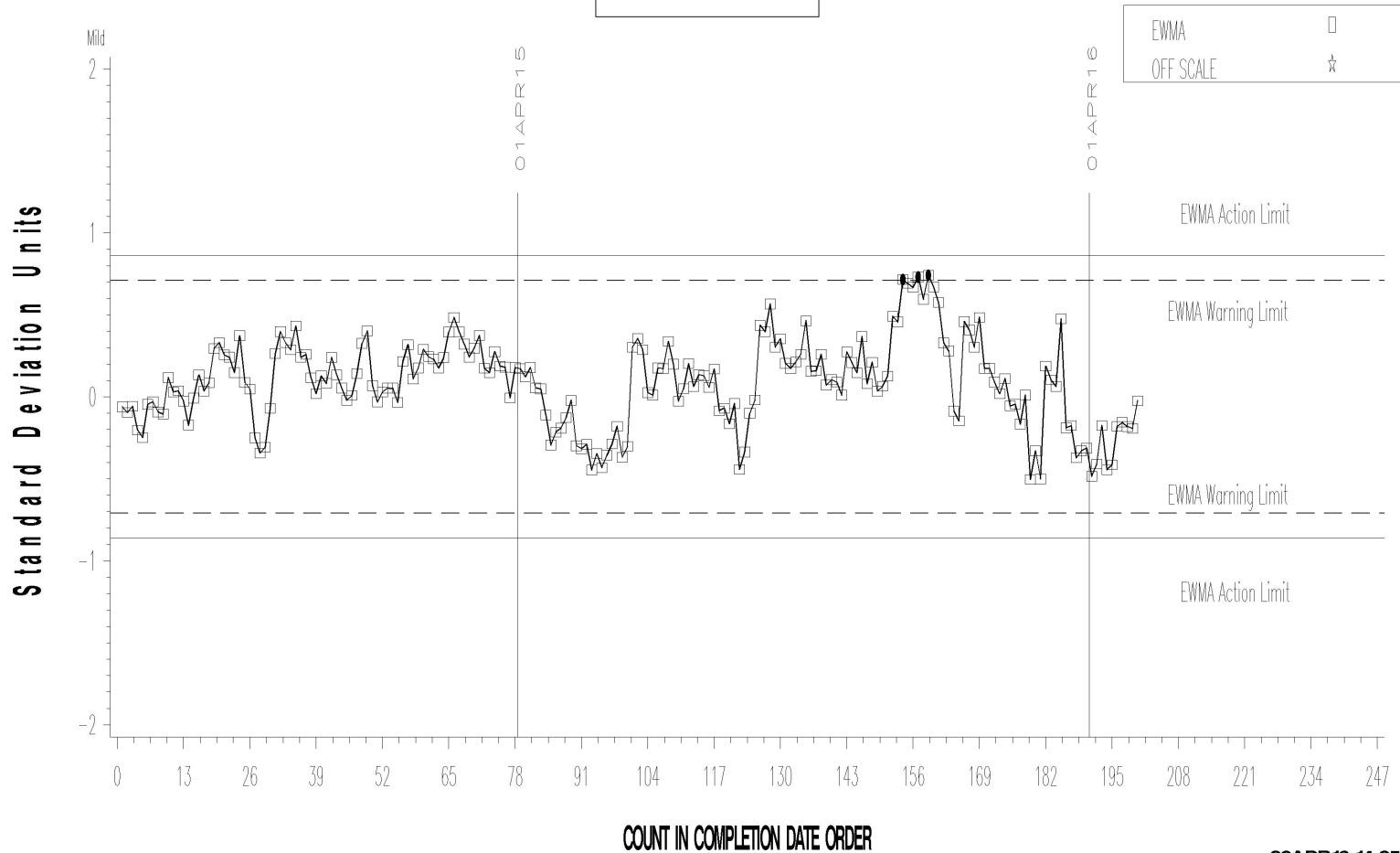
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OSCT (D5662)

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LTMS Severity Analysis



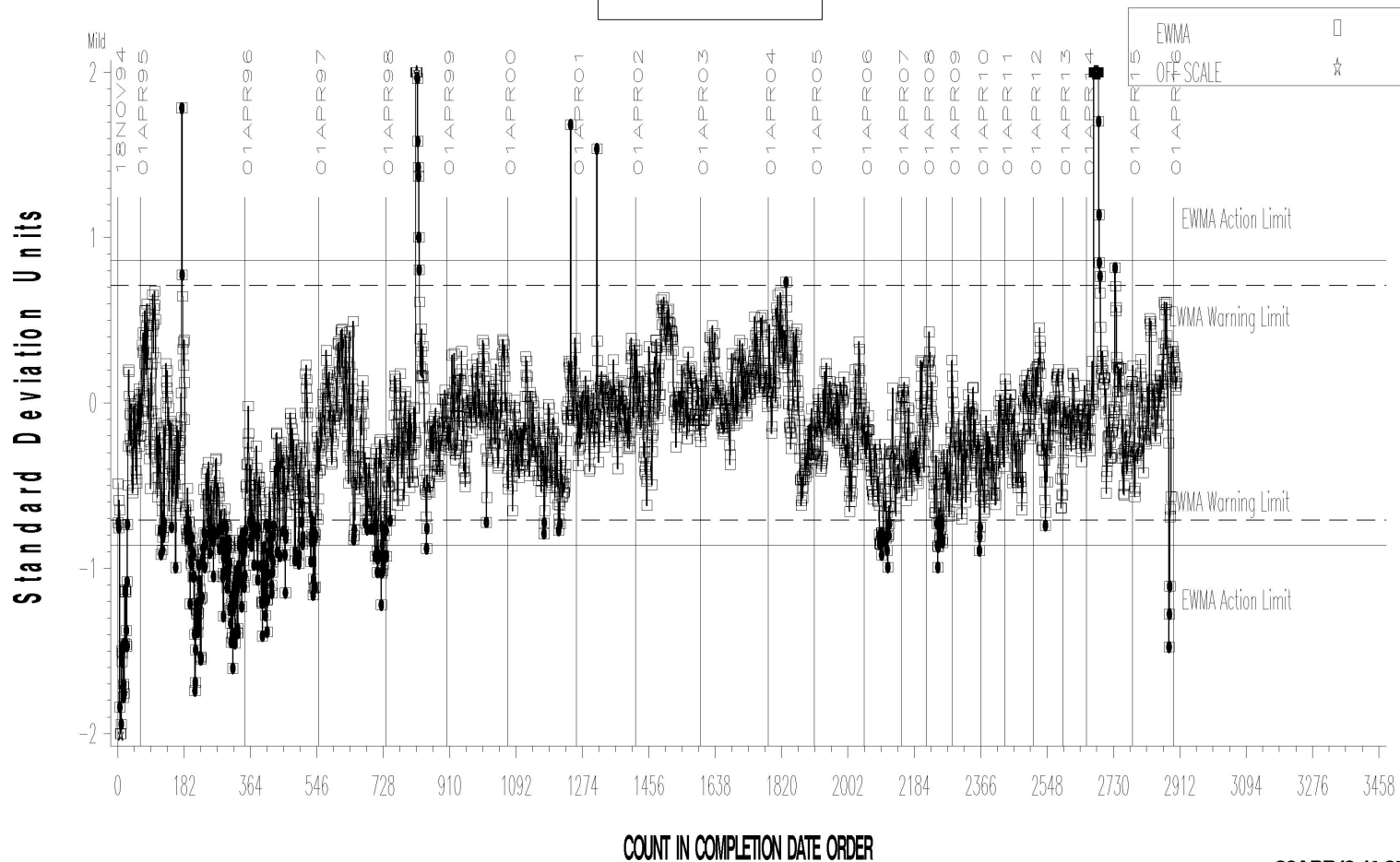
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LTMS Severity Analysis



Spvgrp

29APR16:14:05

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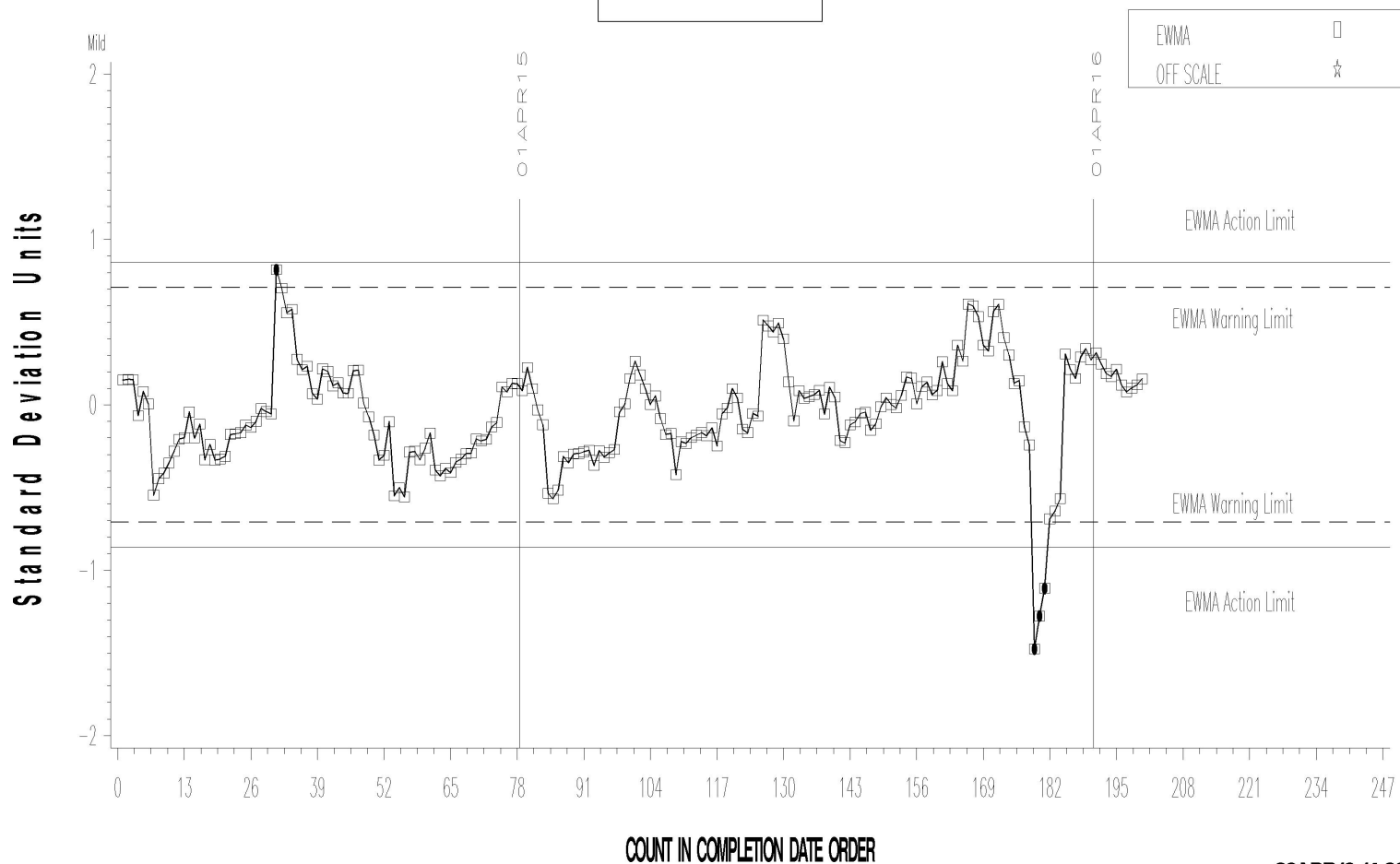
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LTMS Severity Analysis



Severity

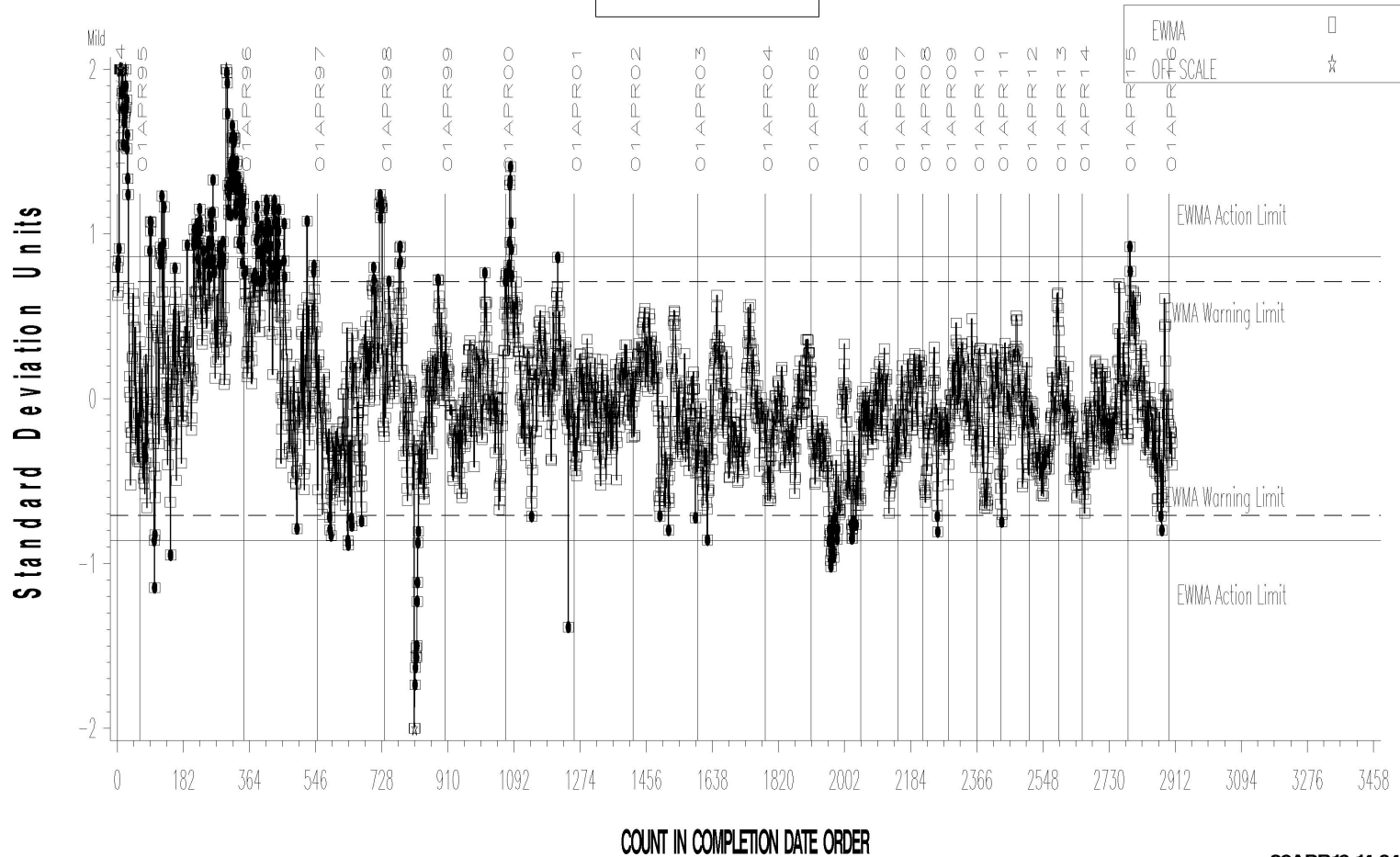
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OSCT (D5662)

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LTMS Severity Analysis



Spvgrp

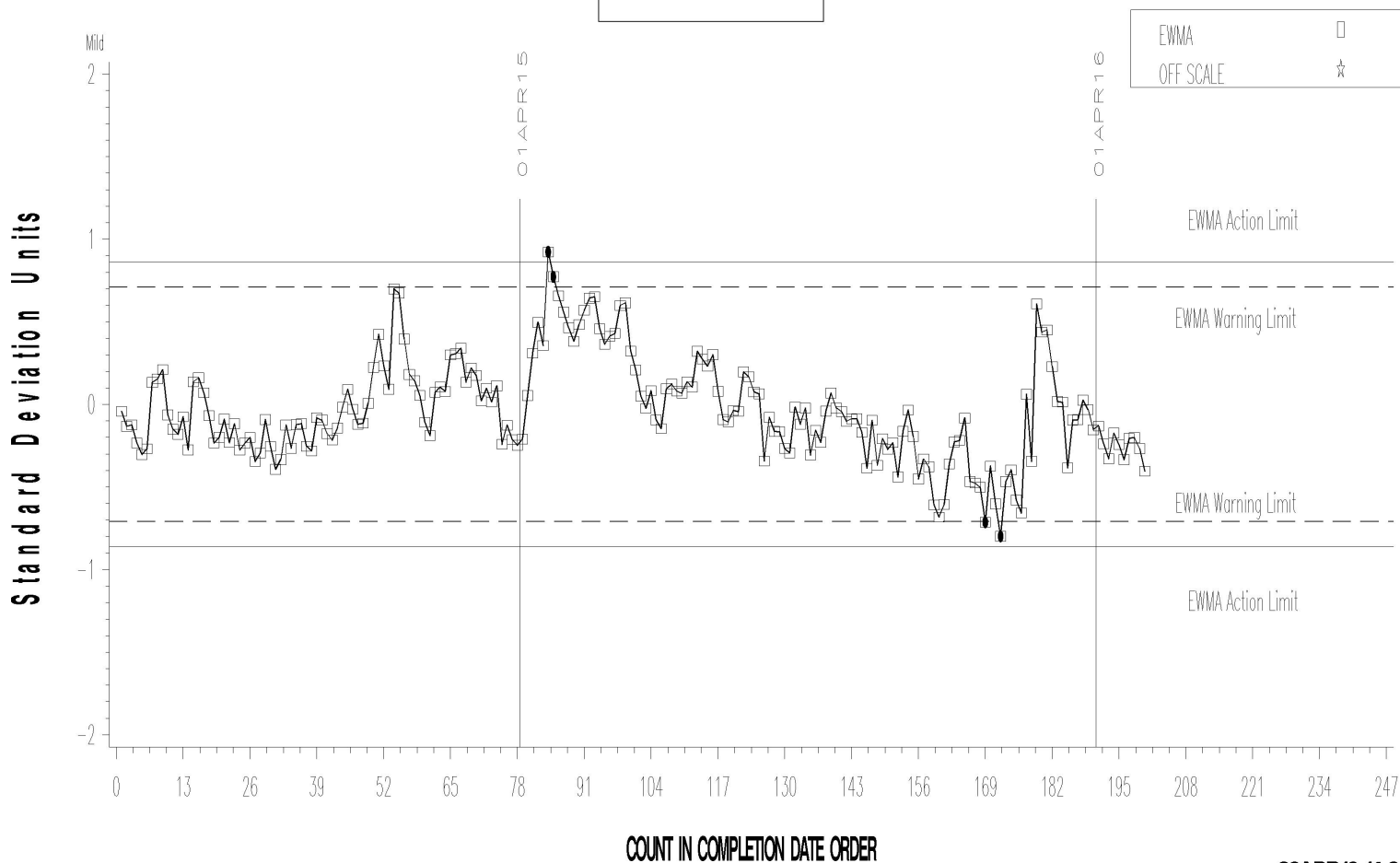
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OSCT (D5662)

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Severp

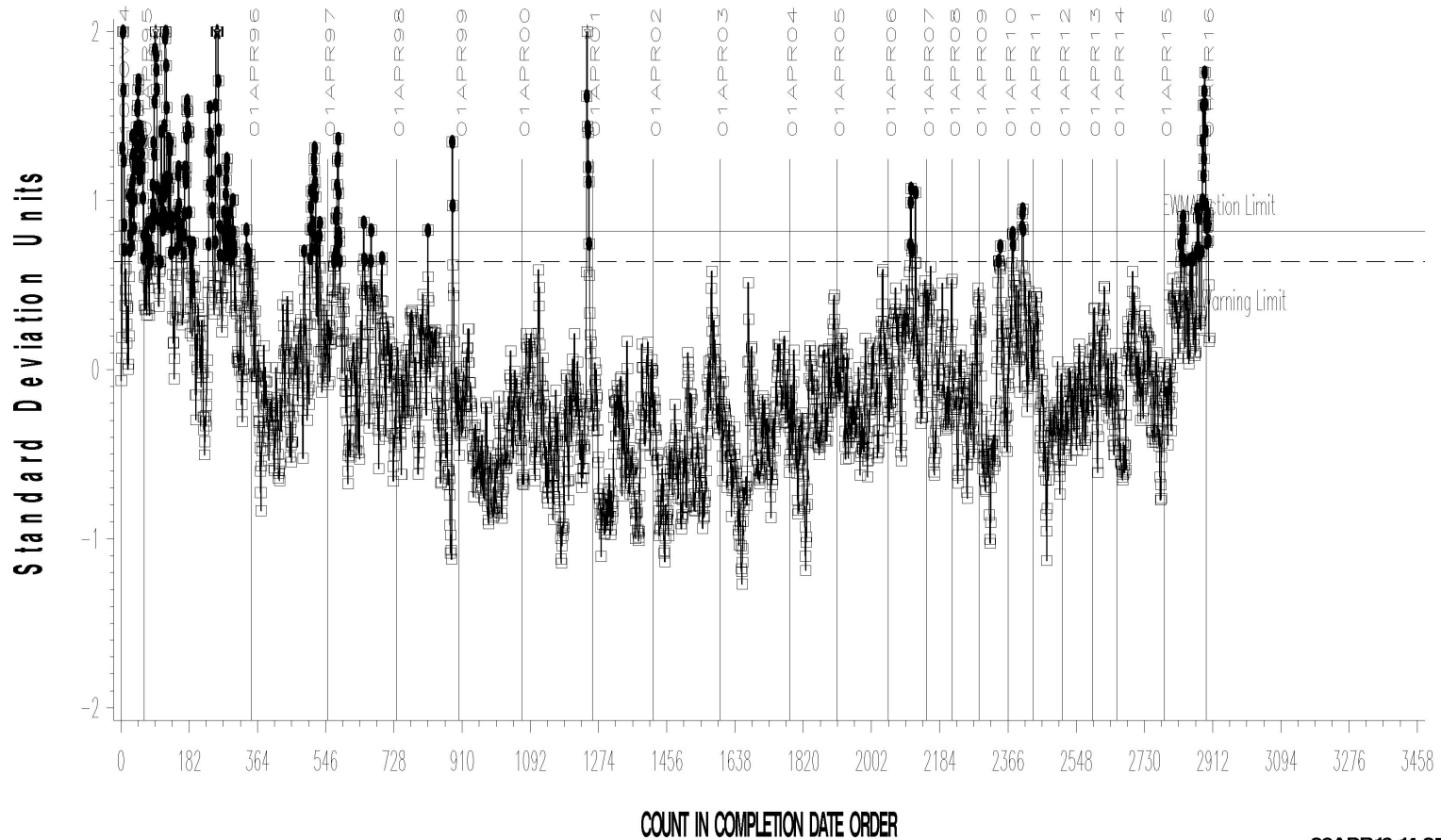
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LTMS Precision Analysis



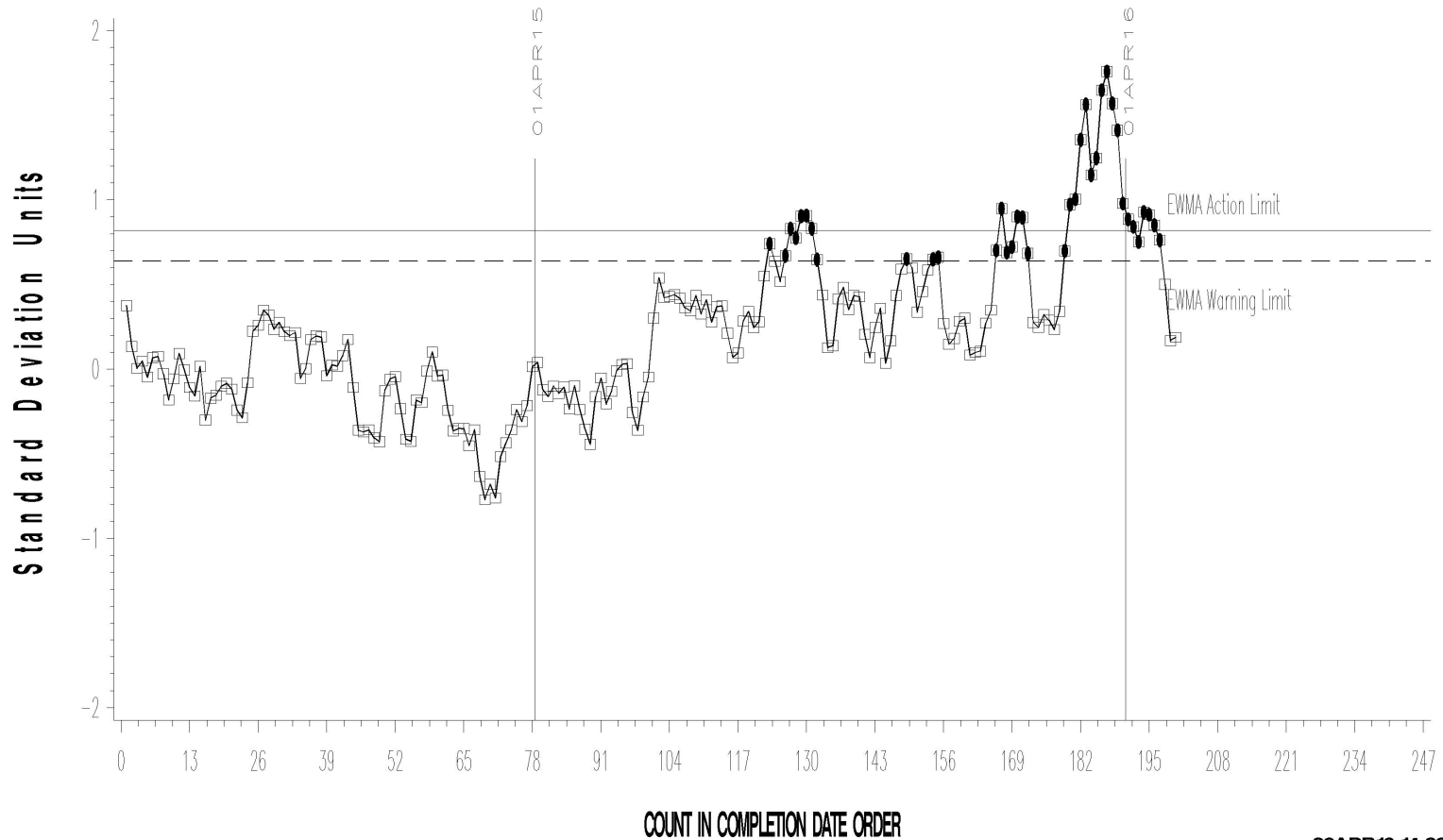
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LTMS Precision Analysis



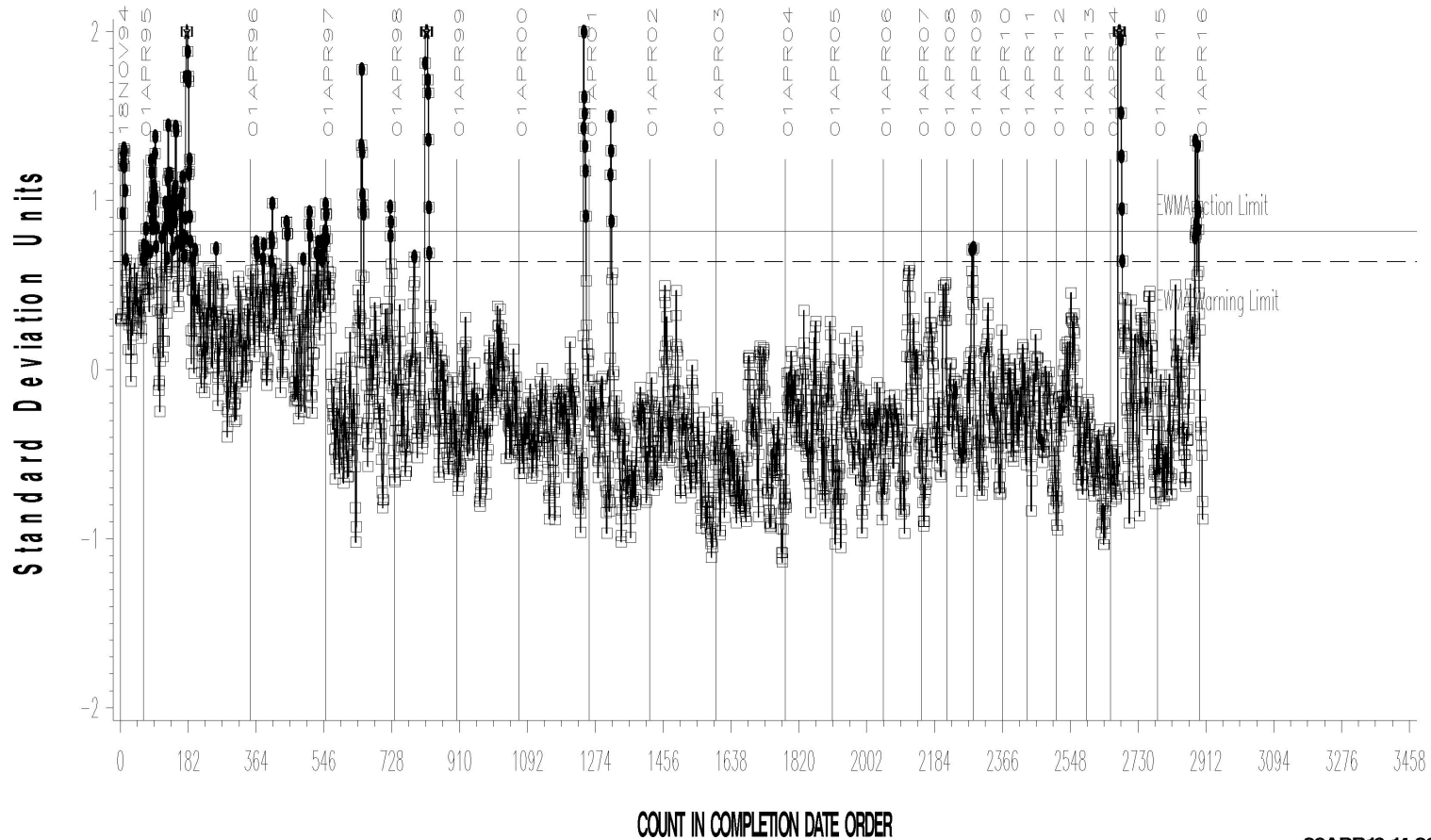
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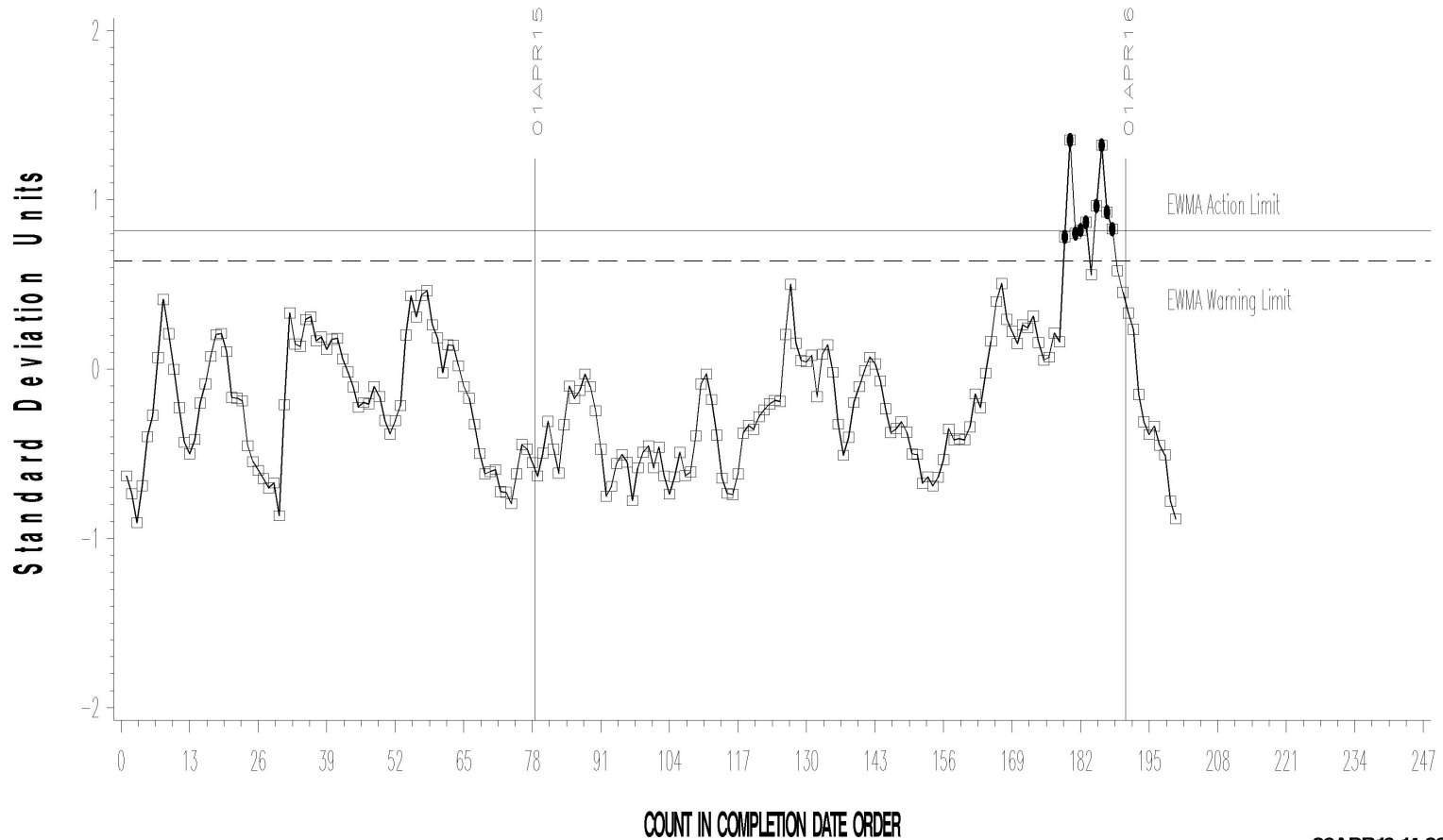


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LTMS Precision Analysis



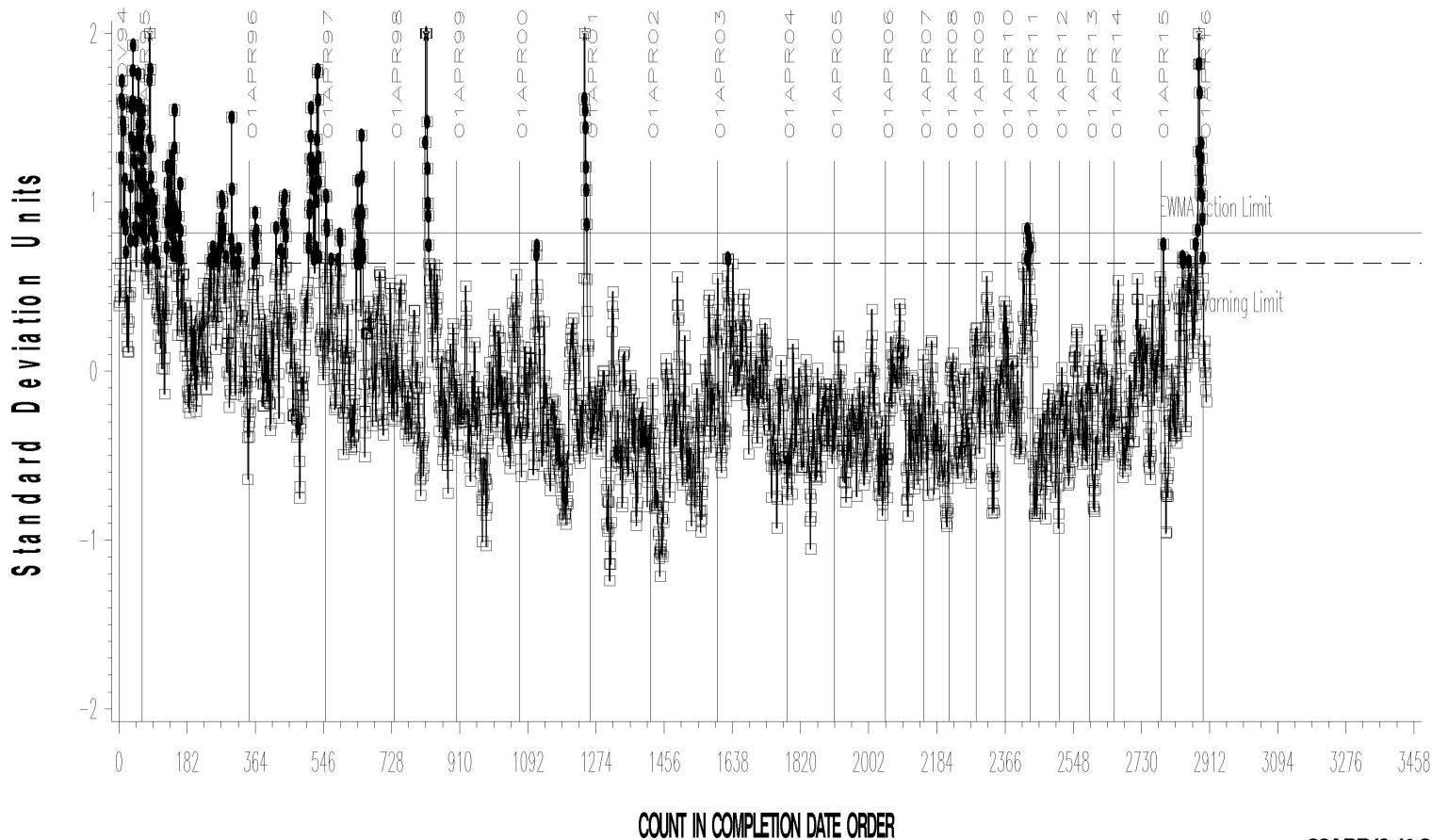
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LTMS Precision Analysis



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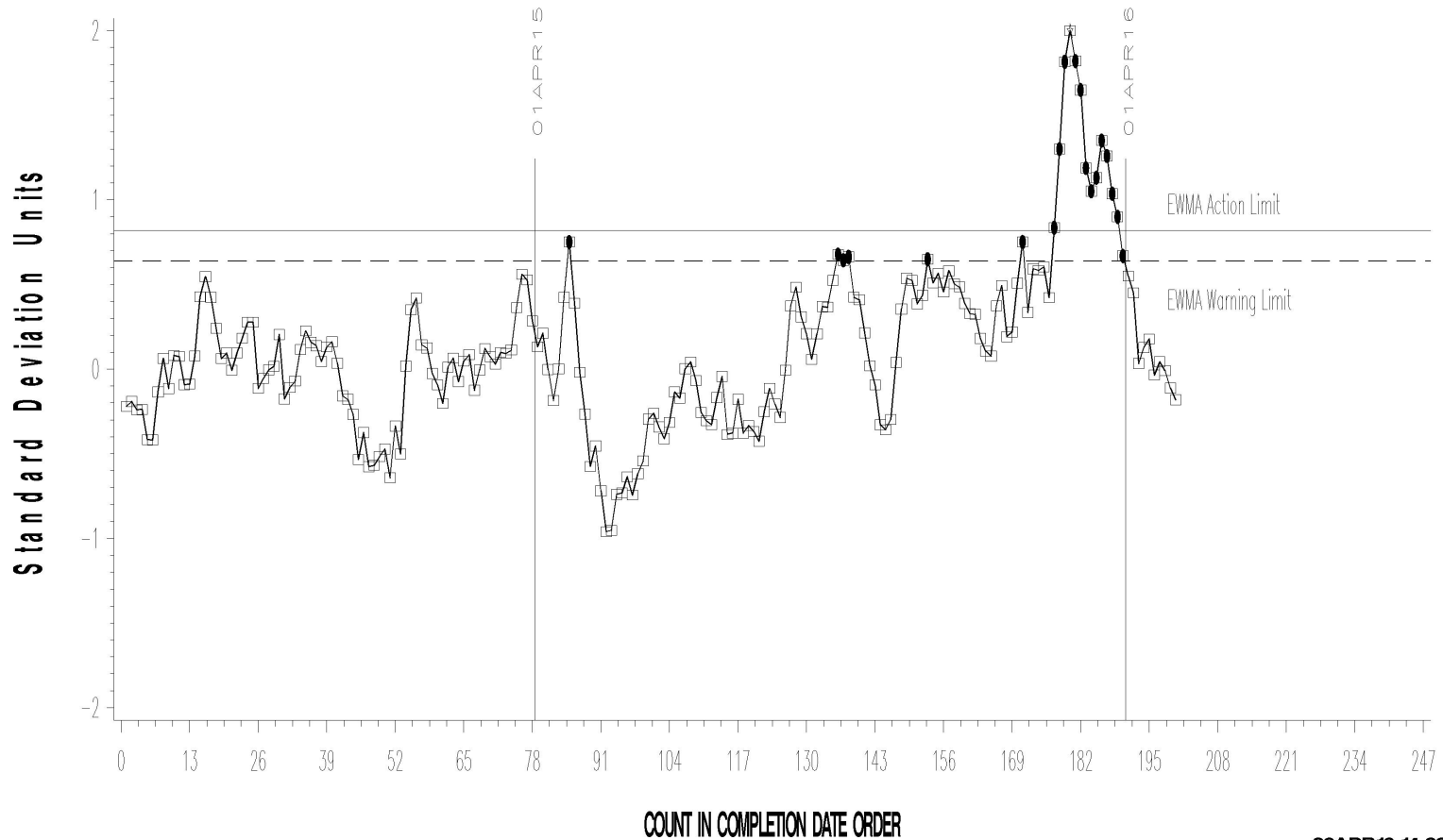
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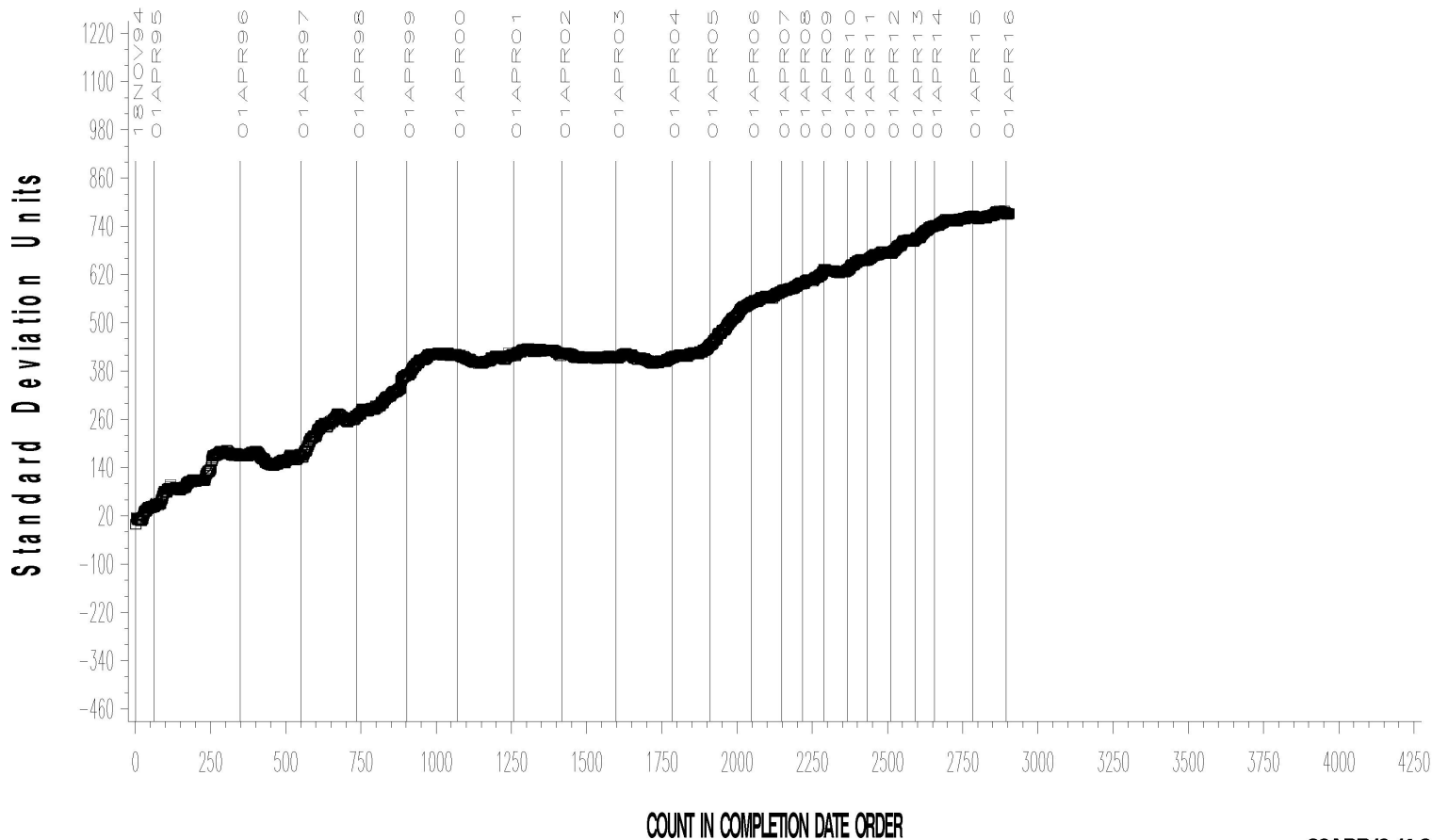
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CUSUM Severity Analysis



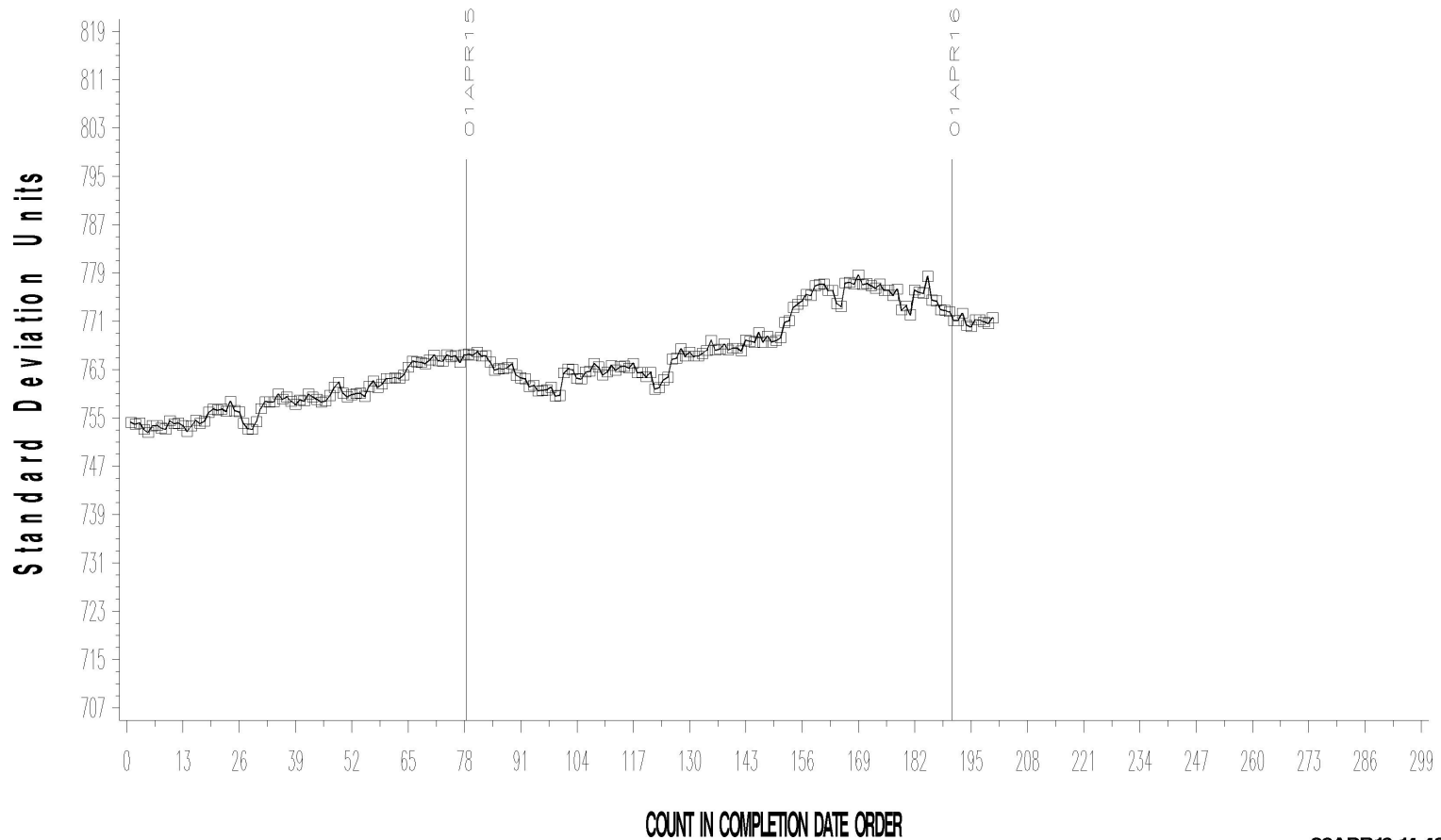
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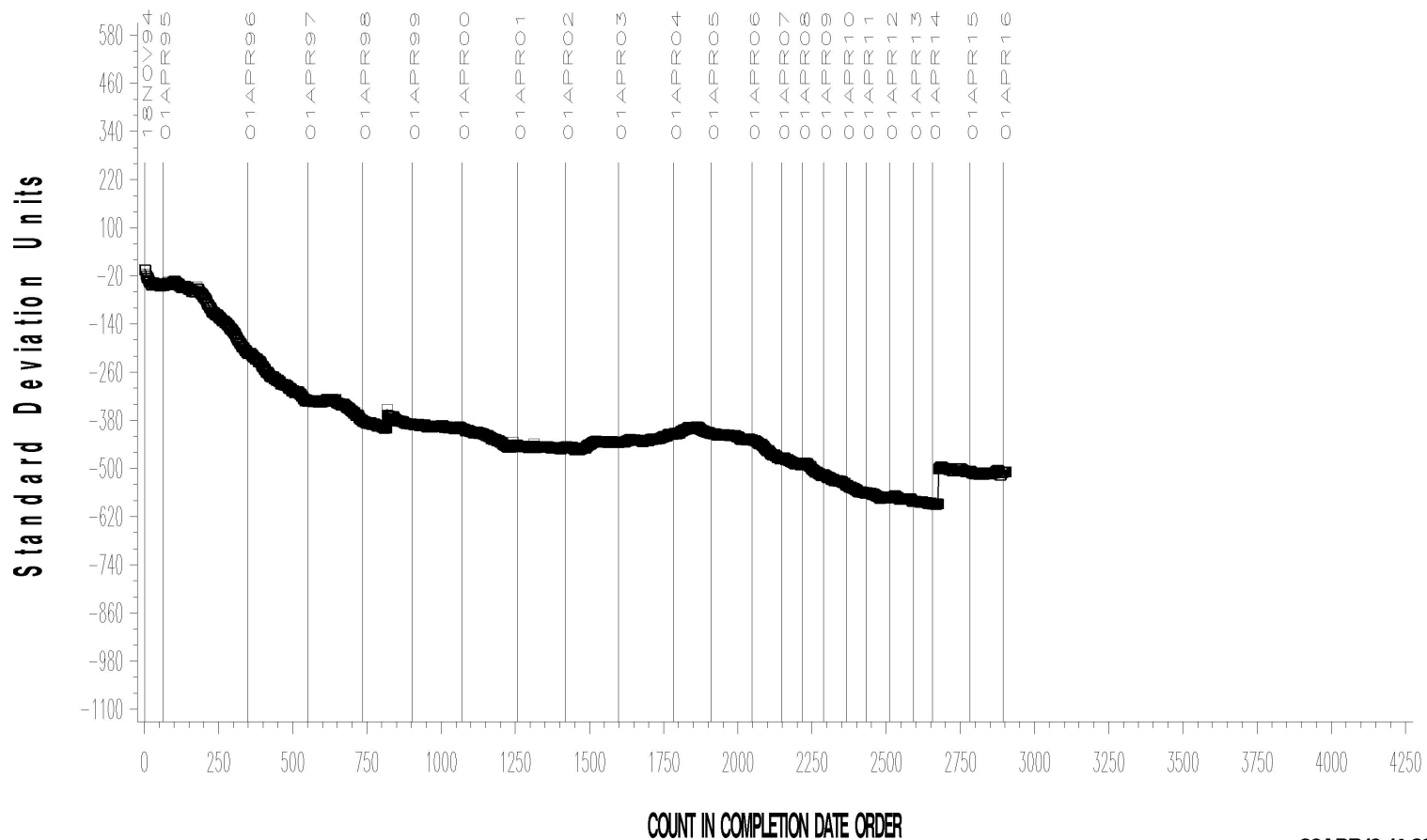
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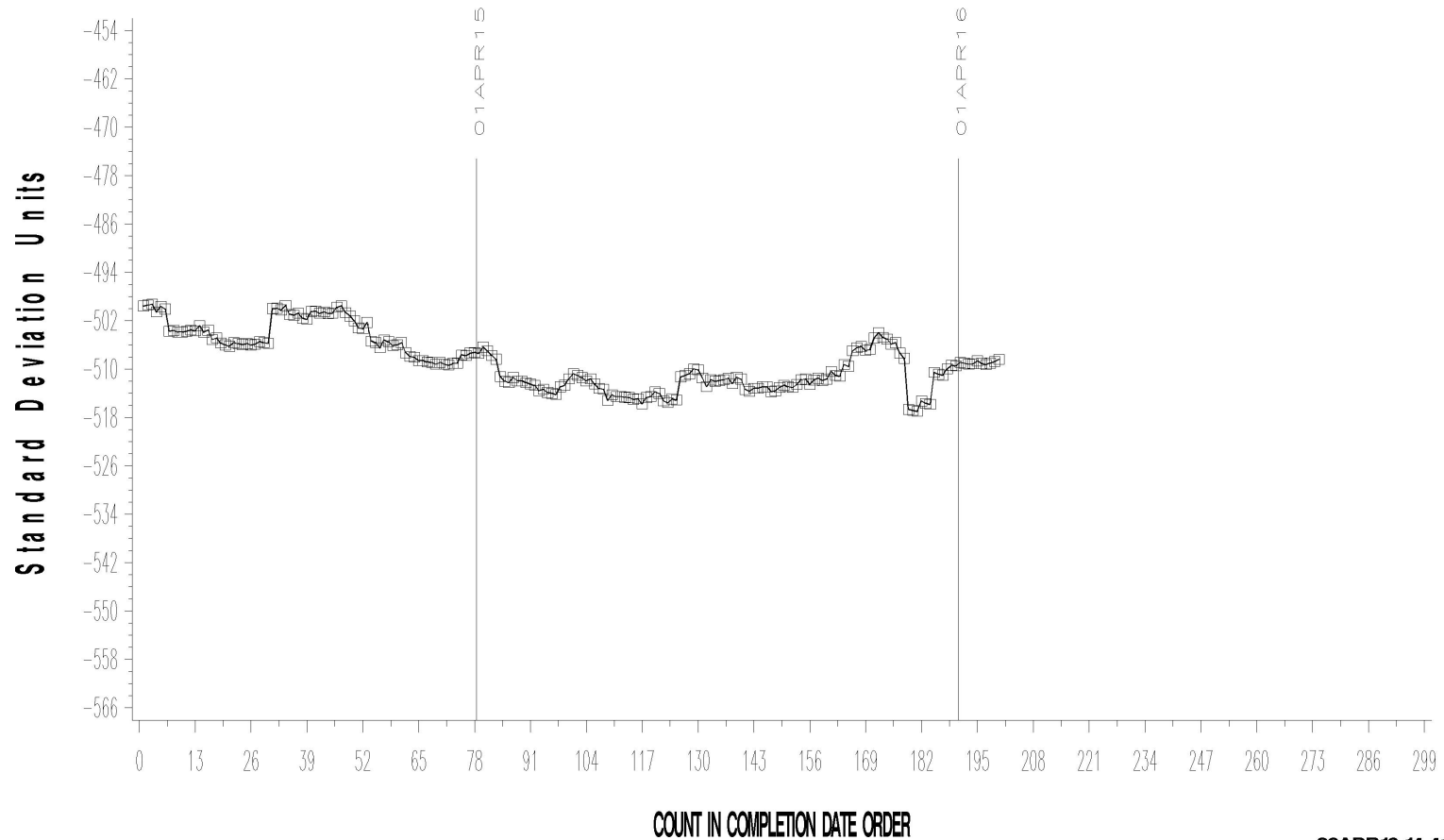
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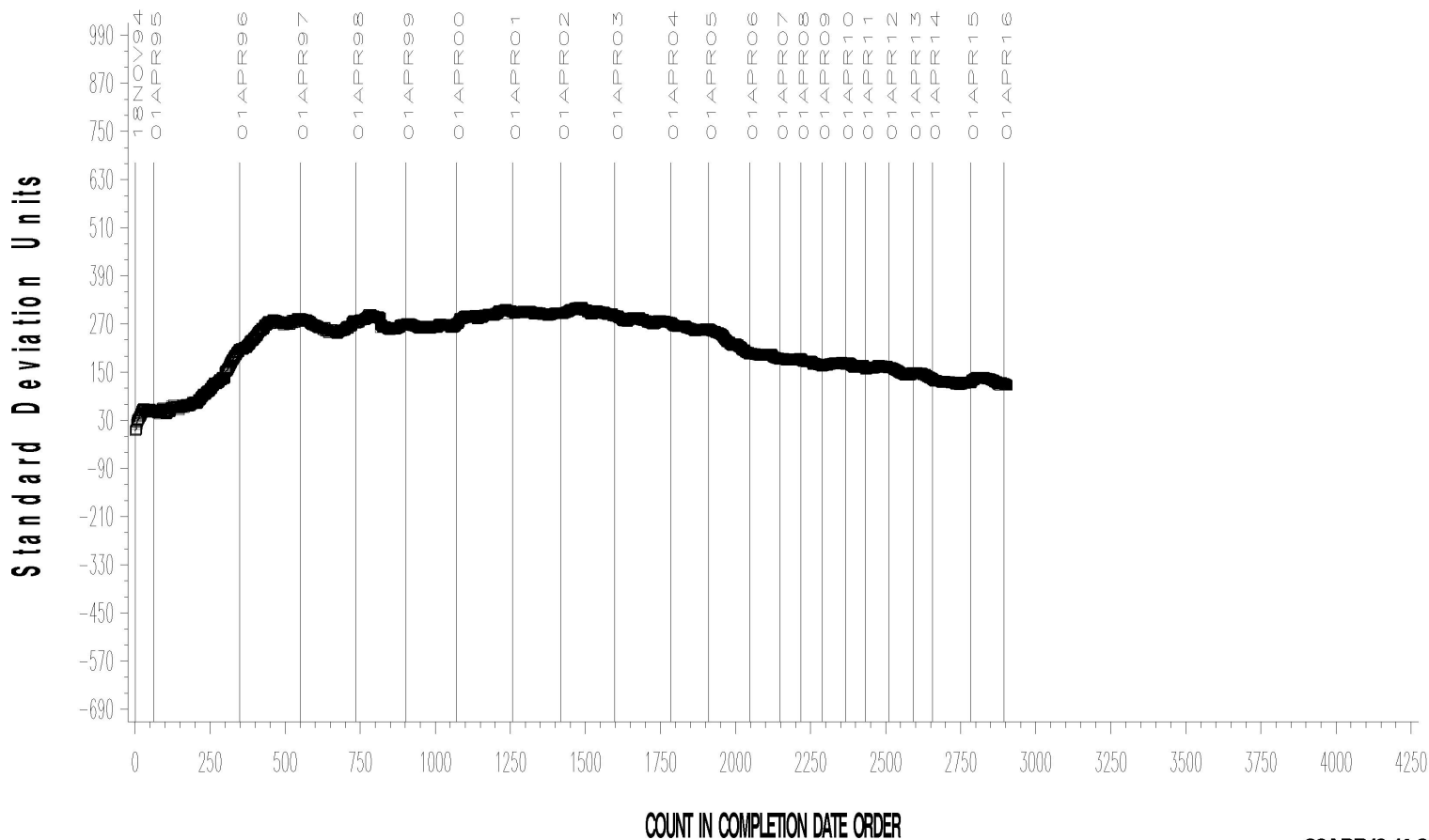
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OSCT (D5662)

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CUSUM Severity Analysis



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OSCT (D5662)

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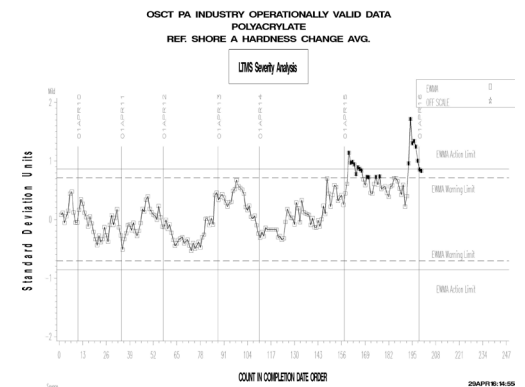
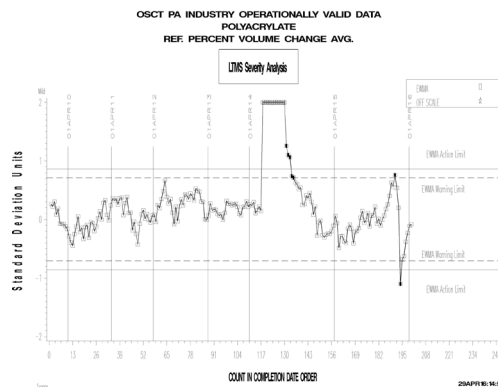
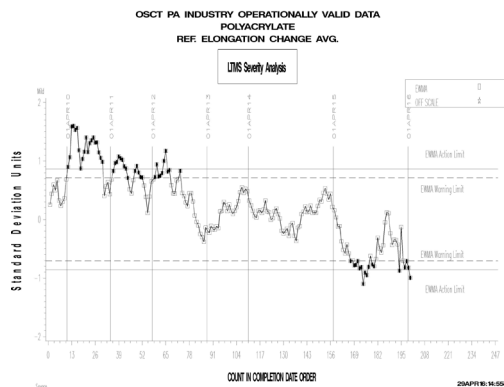
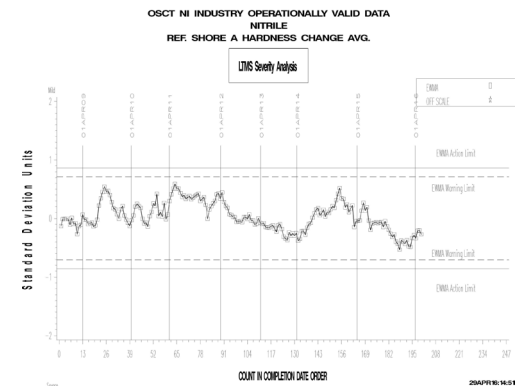
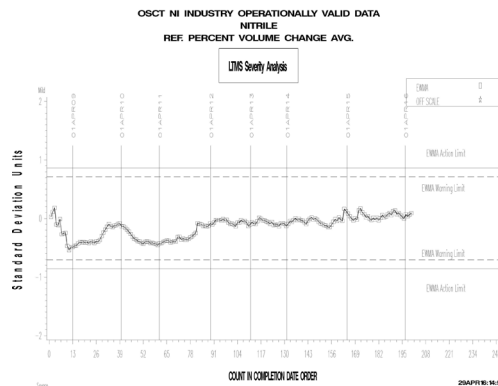
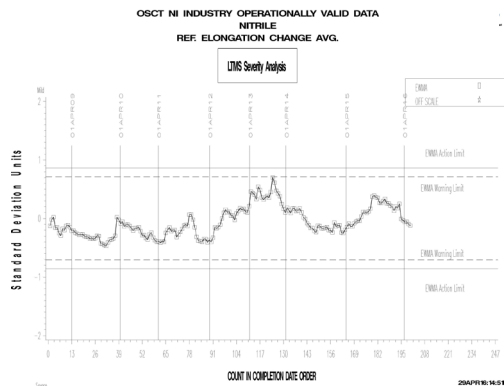
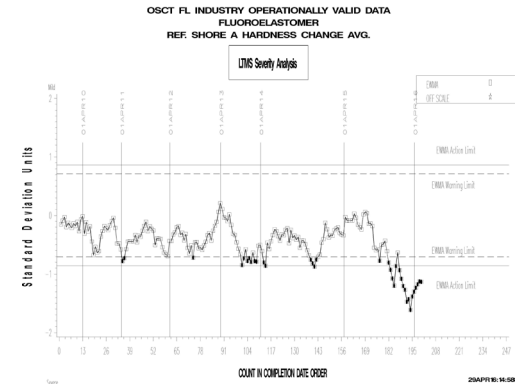
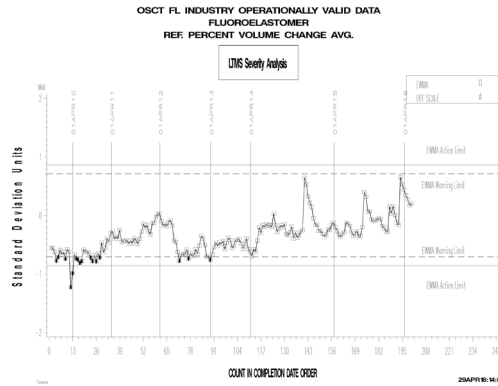
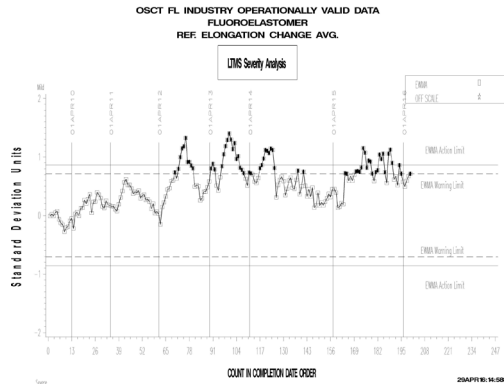
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29APR16: 14:41

OSCT (D5662)



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TIMELINE ADDITIONS

Effective Date	Information Letter	Event
		No timeline additions were made this period.

OSCT (D5662)

LAB VISITS

No OSCT lab visits were conducted during this period.

INFORMATION LETTERS

No information letters were issued this period.

OSCT (D5662)

STATUS OF REFERENCE OIL SUPPLY

Oil	Cans @ Labs	@ TMC	
		Cans	Gallons
160-1	32	142	28.2
161-1	0	0	0.0
168	21	0	0.0
169	40	1103	202.9
170	14	238	47.2
Total	107	1483	278.3

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 nearing depletion and is not re-blendable. The OSCT Surveillance Panel has identified oil 170 as a potential replacement oil and is currently working on introduction.