



## Test Monitoring Center

@ Carnegie Mellon University  
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<http://astmtmc.cmu.edu>  
412-365-1000

MEMORANDUM: 19-048  
DATE: October 28, 2019  
TO: Dale Smith, Chairman, L-33-1 Surveillance Panel  
FROM: Dylan Beck *Dylan Beck*  
SUBJECT: L-33-1 Testing from April 1, 2019 through September 30, 2019

Attached is a summary of testing activity this period.

DJB/djb/mem19-048.djb.doc

cc: Frank Farber

Jeff Clark

L-33-1 Surveillance Panel

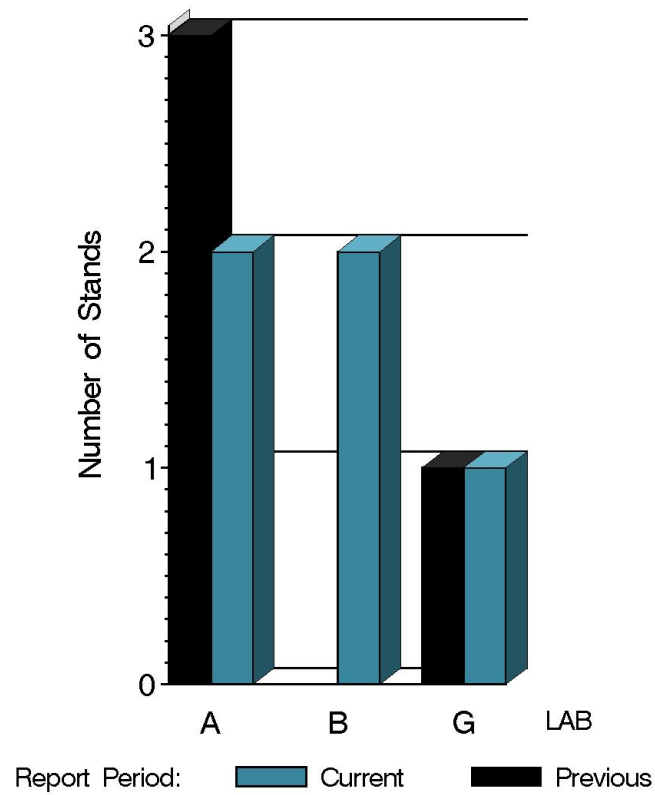
<http://www.astmtmc.cmu.edu/ftp/docs/gear/l331/semiannualreports/L331-10-2019.pdf>

Distribution: email

# L-33-1 (D7038)

	Reporting Data	Calibrated on 9-30-19
Number of Labs	3	3
Number of Stands	5	5

BY-LAB STAND  
DISTRIBUTION



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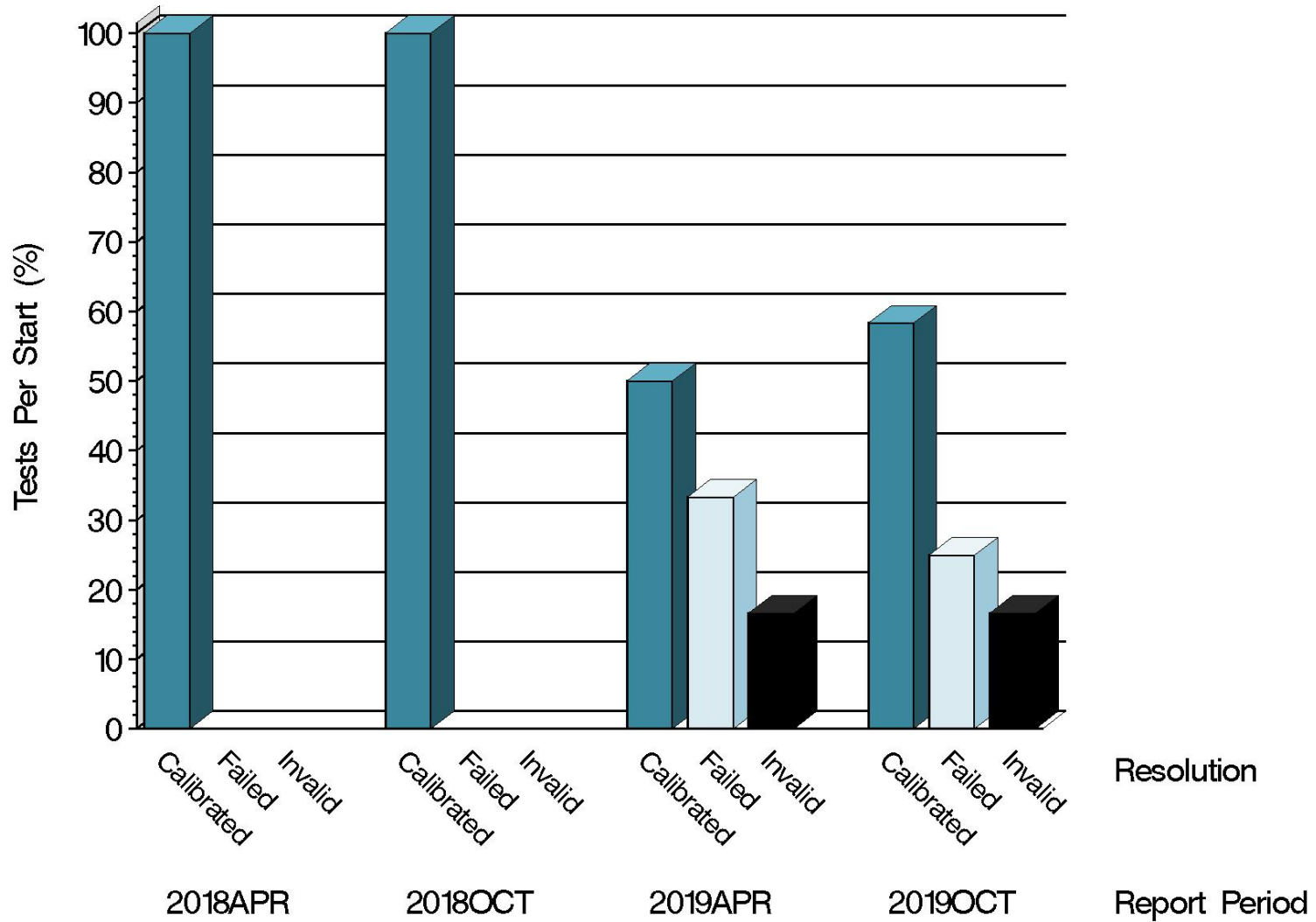
# L-33-1 (D7038)

## Test Distribution by Oil and Validity

					Totals	
		123-2	155	155-1	Last Period	This Period
Accepted for calibration	AC	4	0	3	3	7
Rejected (Mild)	OC	0	0	1	1	1
Rejected (Severe)	OC	0	0	0	0	0
Rejected (Precision)	OC	0	0	2	1	2
Invalidated calibration	LC	0	0	0	0	0
Aborted	XC	1	0	1	1	2
Unacceptable info run	MI	0	0	0	0	0
Accepted information run	NI	0	0	1	0	1
<b>Total</b>		<b>5</b>	<b>0</b>	<b>8</b>	<b>6</b>	<b>13</b>

# L-33-1 (D7038)

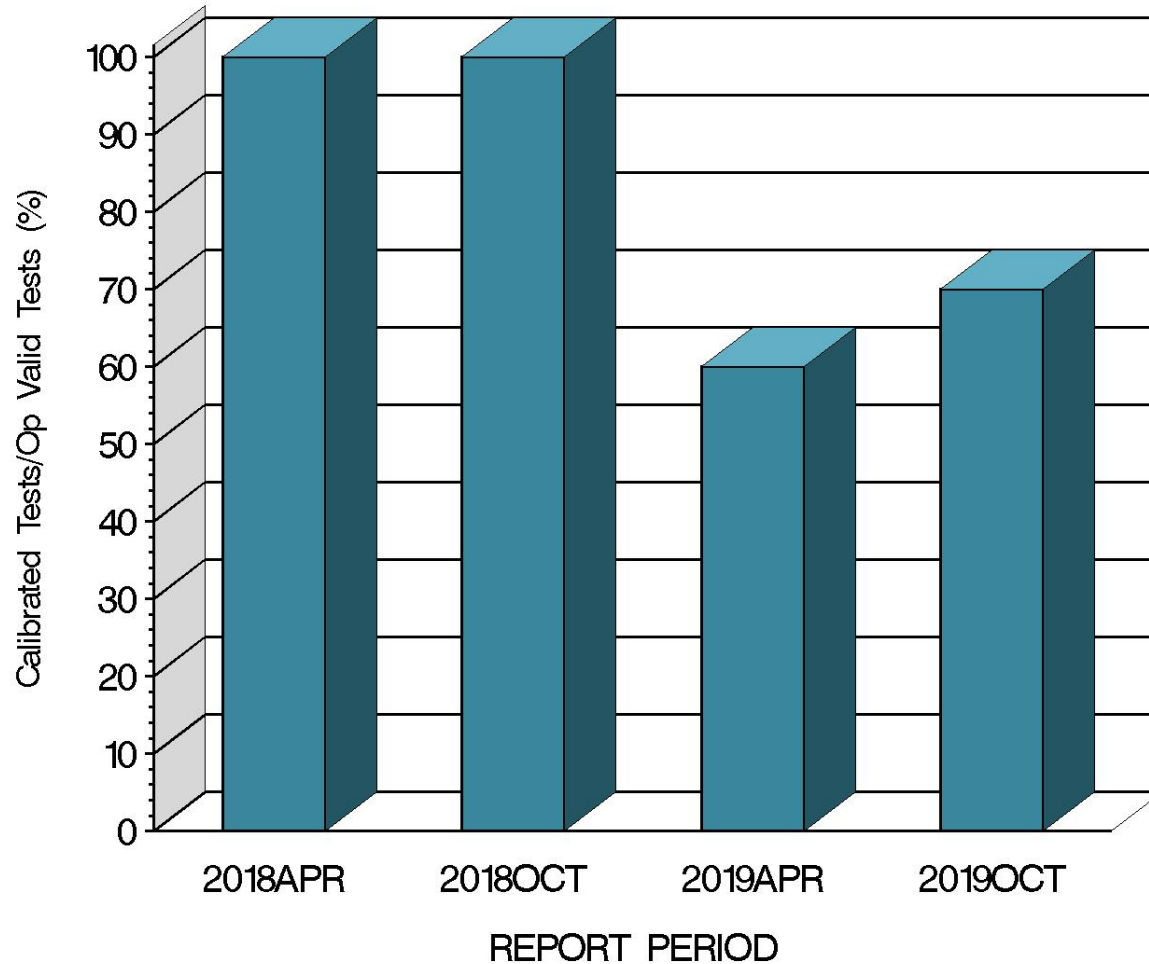
## CALIBRATION ATTEMPT SUMMARY



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# L-33-1 (D7038)

OPERATIONALLY VALID TESTS  
MEETING ACCEPTANCE CRITERIA



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# L-33-1 (D7038)

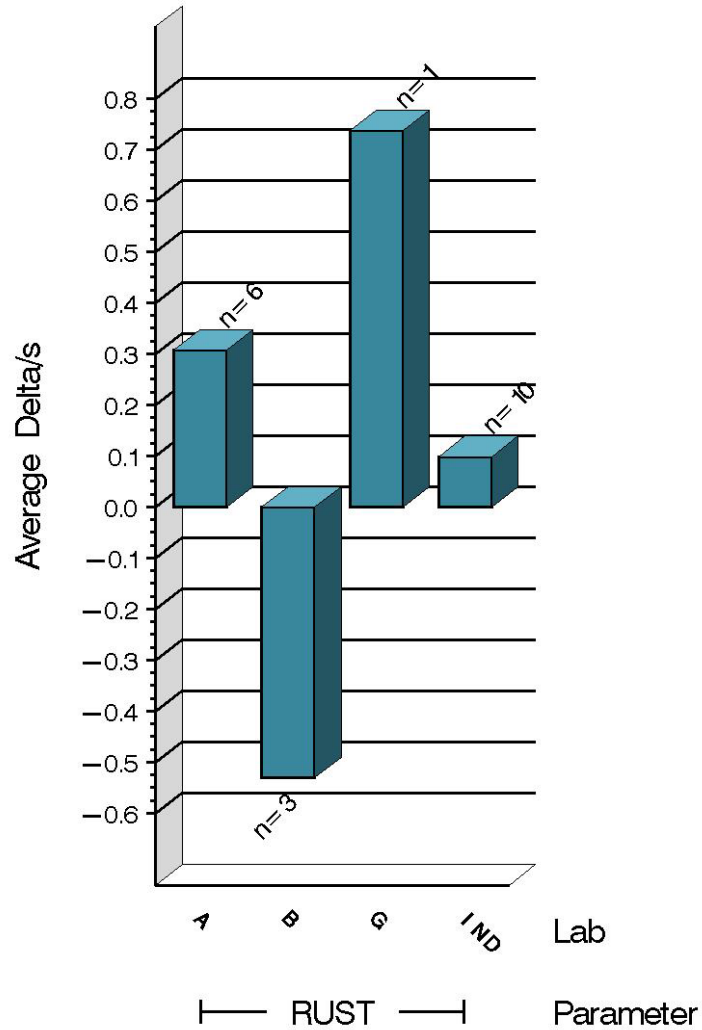
# L-33-1 (D7038)

## CAUSES FOR LOST TESTS

Lab	Cause	Oil			Validity			Loss Rate		
		123-2	155	155-1	RC	LC	XC	Lost	Starts	%
A	Motoring phase out of spec	•					•	1	8	13%
A	Motor drive failure			•			•	1	8	13%
		Lost	1	0	1	0	0	1		
		Starts	5	0	8	13	13	13		
		%	20%	0%	13%	0%	0%	7.7%		

# L-33-1 (D7038)

TEST SEVERITY  
DELTA/S BY LAB





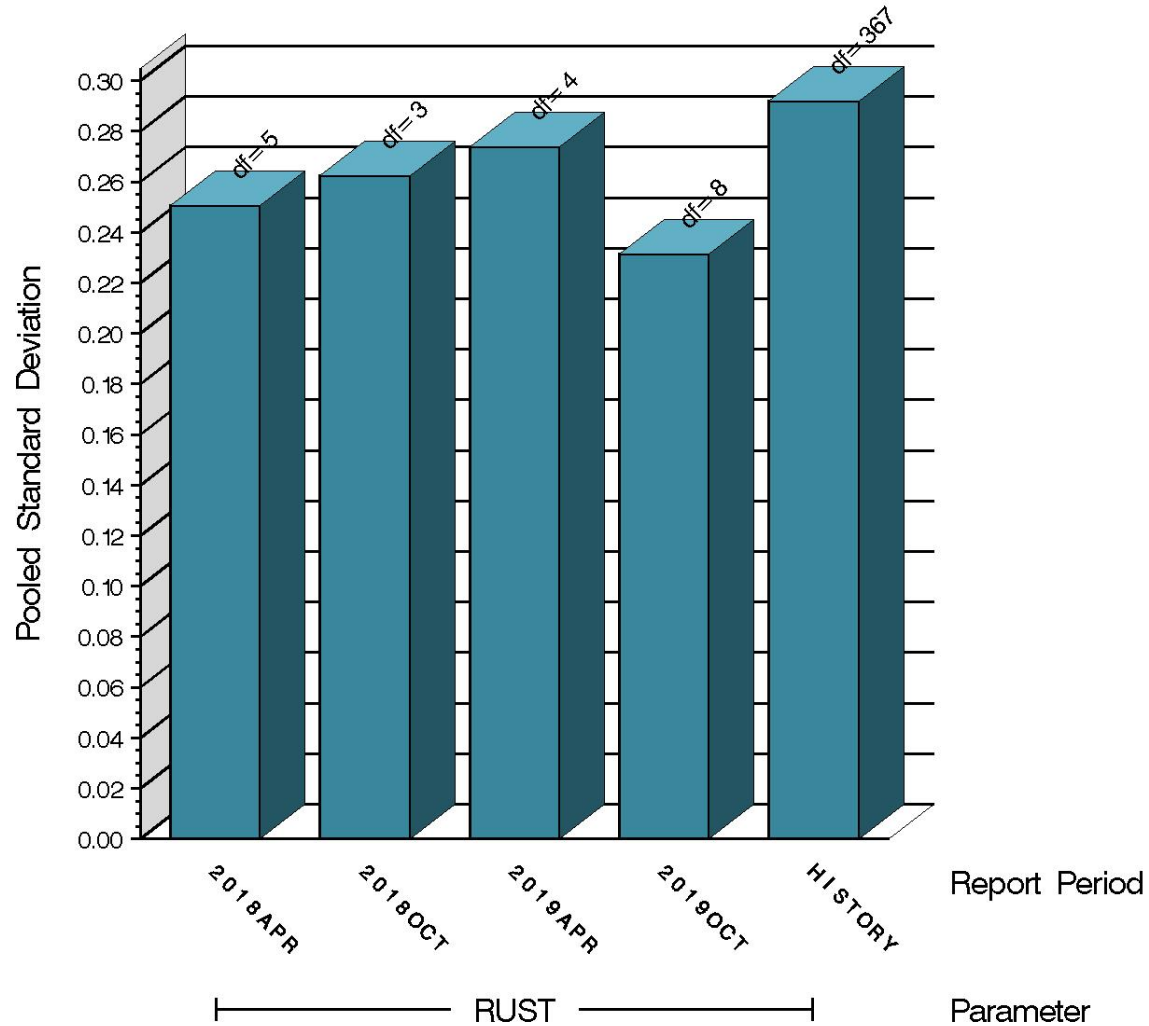
## L-33-1 (D7038)

Average $\Delta/s$ by Lab		
Lab	n	RUST
A	6	0.307

B	3	-0.530
G	1	0.737
Industry	10	0.099
Shift	20	0.025 merits

# L-33-1 (D7038)

TEST PRECISION  
POOLED STANDARD DEVIATION  
BY SIX-MONTH ASTM REPORT PERIOD



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# L-33-1 (D7038)

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## SUMMARY OF SEVERITY & PRECISION

### Severity

The severity action limit was not exceeded during this period.

### Precision

The precision action limit was not exceeded during this period.

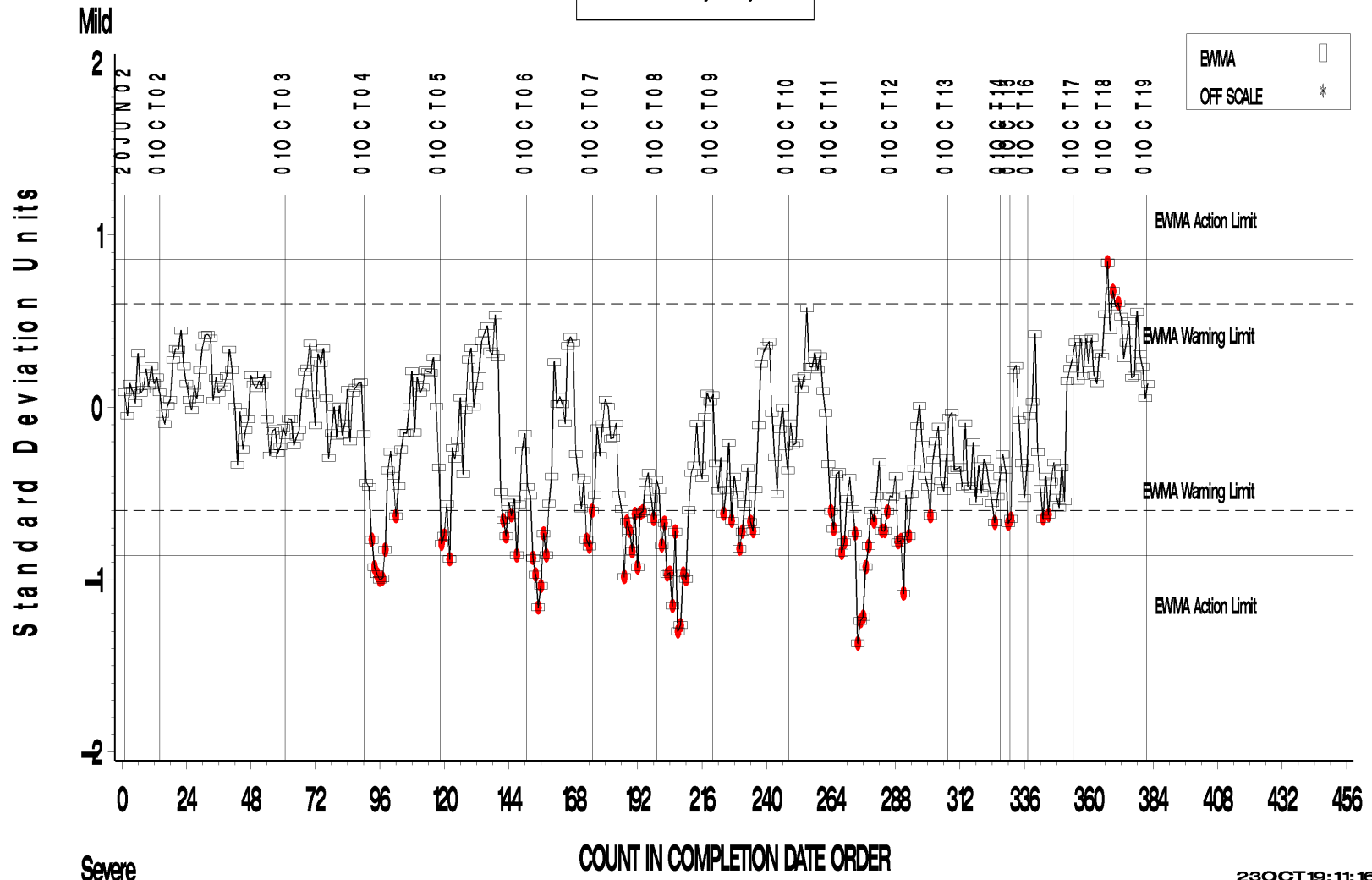
Industry control charts follow.

# L-33-1 (D7038)

L-33-1 INDUSTRY OPERATIONALLY VALID DATA

FINAL RUST RESULT

LTMS Severity Analysis



23OCT19:11:16

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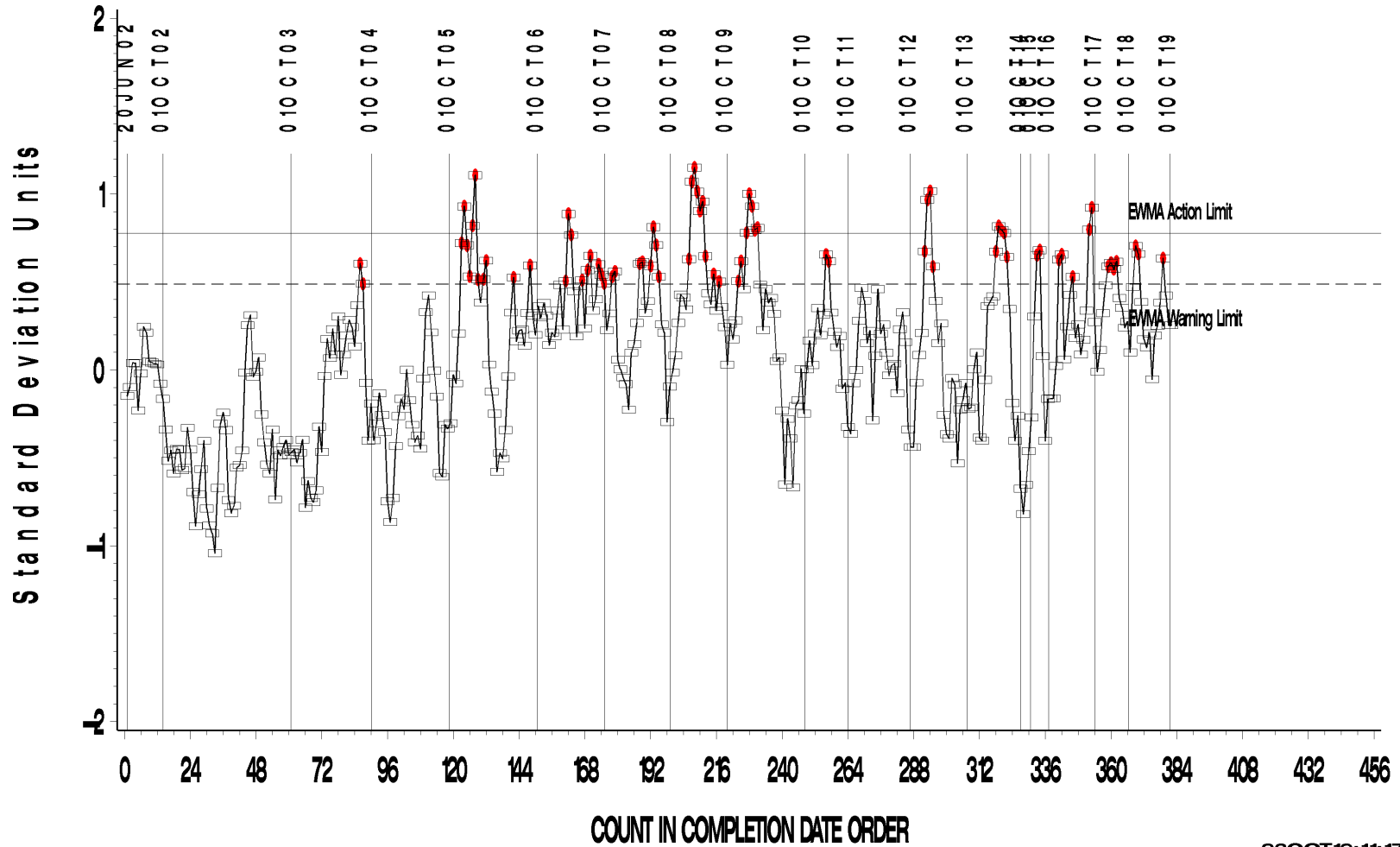
A Program of ASTM International

# L-33-1 (D7038)

L-33-1 INDUSTRY OPERATIONALLY VALID DATA

FINAL RUST RESULT

LTMS Precision Analysis



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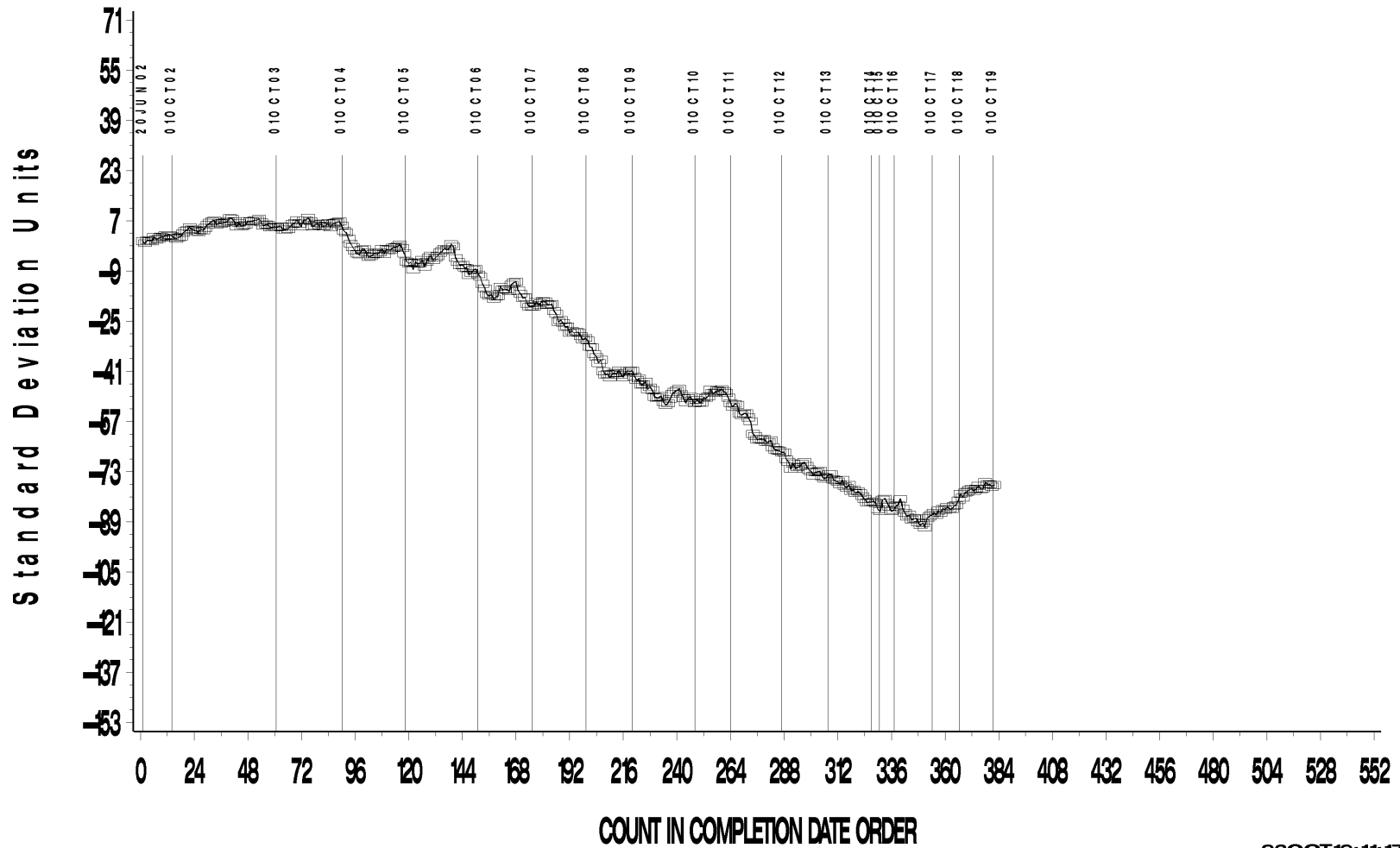
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# L-33-1 (D7038)

L-33-1 INDUSTRY OPERATIONALLY VALID DATA

FINAL RUST RESULT

CUSUM Severity Analysis



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# L-33-1 (D7038)

## TIMELINE ADDITIONS

Effective Date	Information Letter	Event
		No events this period



# L-33-1 (D7038)

## LAB VISITS

No L-331 lab visits were conducted during this period.

## INFORMATION LETTERS

No information letters were issued during this period.

# L-33-1 (D7038)

## STATUS OF REFERENCE OIL SUPPLY

Oil	Cans @ Labs	@ TMC	
		Cans	Gallons
123-2	11	101	101.0
155	0	27	27.5
155-1	7	80	80.8
Total	18	208	209.3

The TMC quantity remaining presumes usage only for L-33-1 testing. Oil 155/155-1 is also used in other test areas (L-37, L-37-1, L-60-1, and HTCT).