




Test Monitoring Center

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

MEMORANDUM: 13-017
DATE: April 11, 2013
TO: Larry Hamilton, Chairman, L-60-1 Surveillance Panel
FROM: Scott Parke 
SUBJECT: L-60-1 Testing from October 1, 1012 through March 31, 2013

Please find attached a summary of testing activity this period.

SDP/sdp/mem13-017.sdp.doc

cc: Frank Farber
Jeff Clark

L-60-1 Surveillance Panel

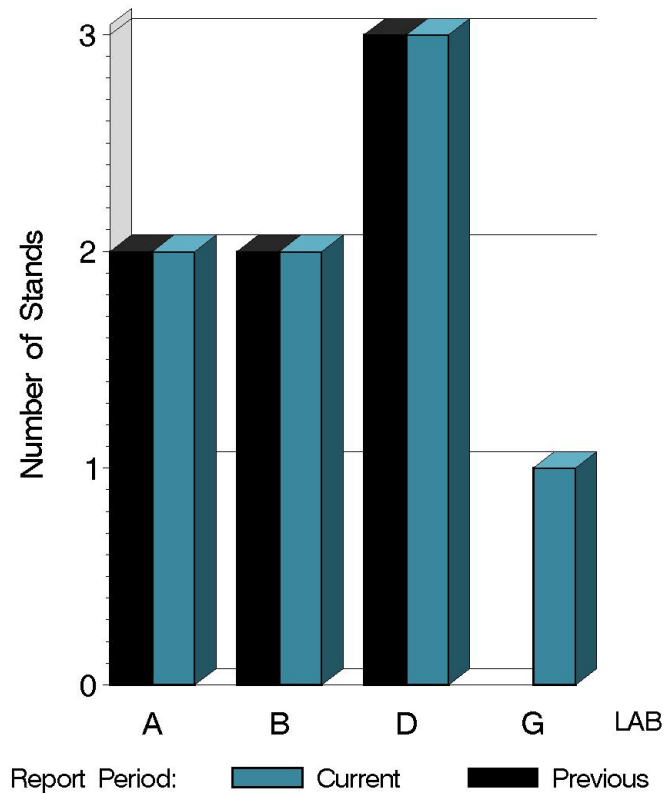
<ftp://ftp.astmtmc.cmu.edu/docs/gear/l601/semiannualreports/l601-04-2013.pdf>

Distribution: email

L-60-1 (D5704)

	Reporting Data	Calibrated on 3-31-13
Number of Labs	4	4
Number of Stands	8	8

BY-LAB STAND
DISTRIBUTION



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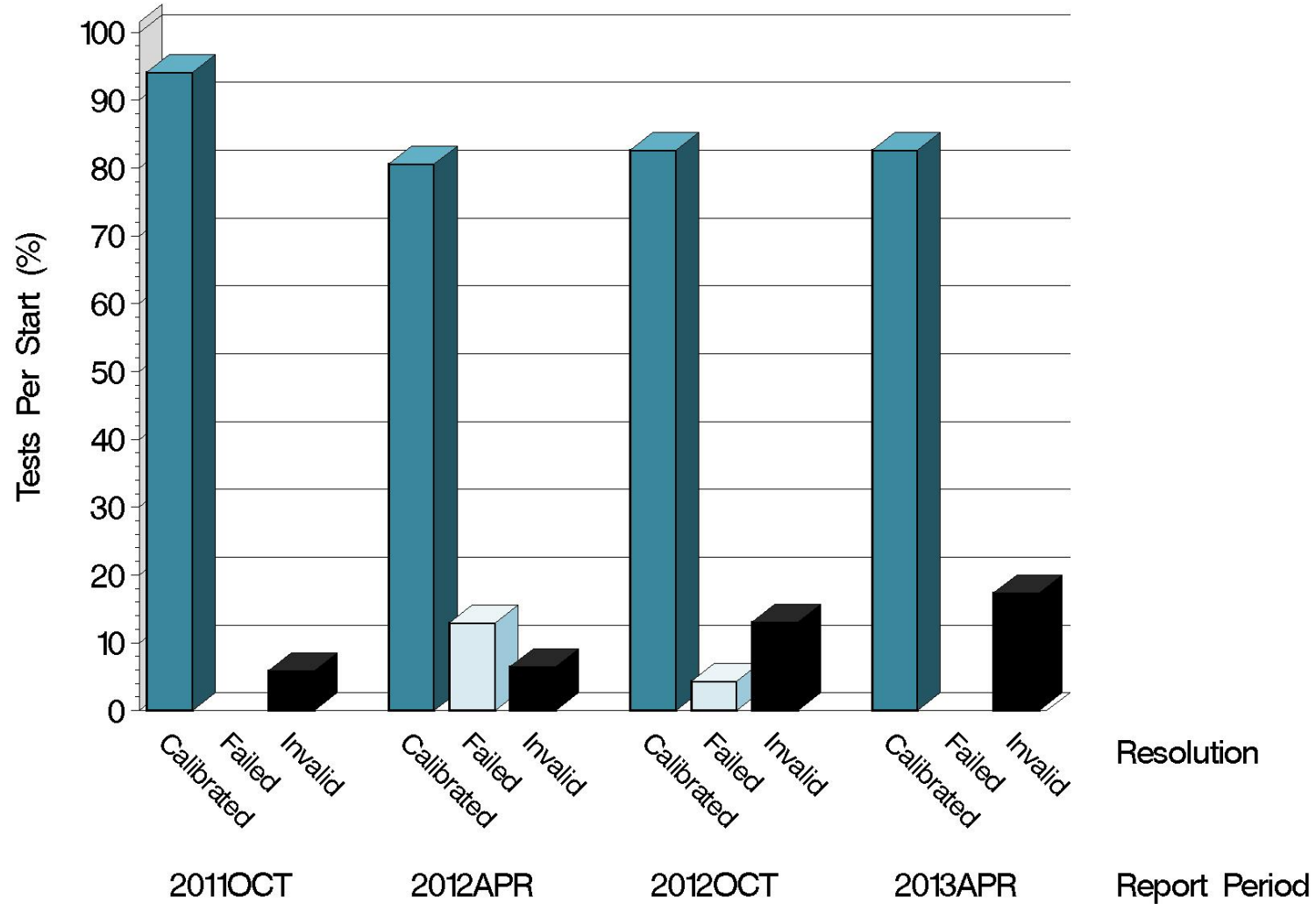
L-60-1 (D5704)

Test Distribution by Oil and Validity

				Totals	
		148-1	151-2	Last Period	This Period
Accepted for calibration	AC	11	8	19	19
Rejected (Mild)	OC	0	0	0	0
Rejected (Severe)	OC	0	0	1	0
Rejected (Precision)	OC	0	0	0	0
Invalidated calibration	LC	1	1	3	2
Hardware approval	NI	0	1	9	1
Operationally invalid	RC	0	0	0	0
Aborted	XC	1	1	0	2
Total		13	11	32	24

L-60-1 (D5704)

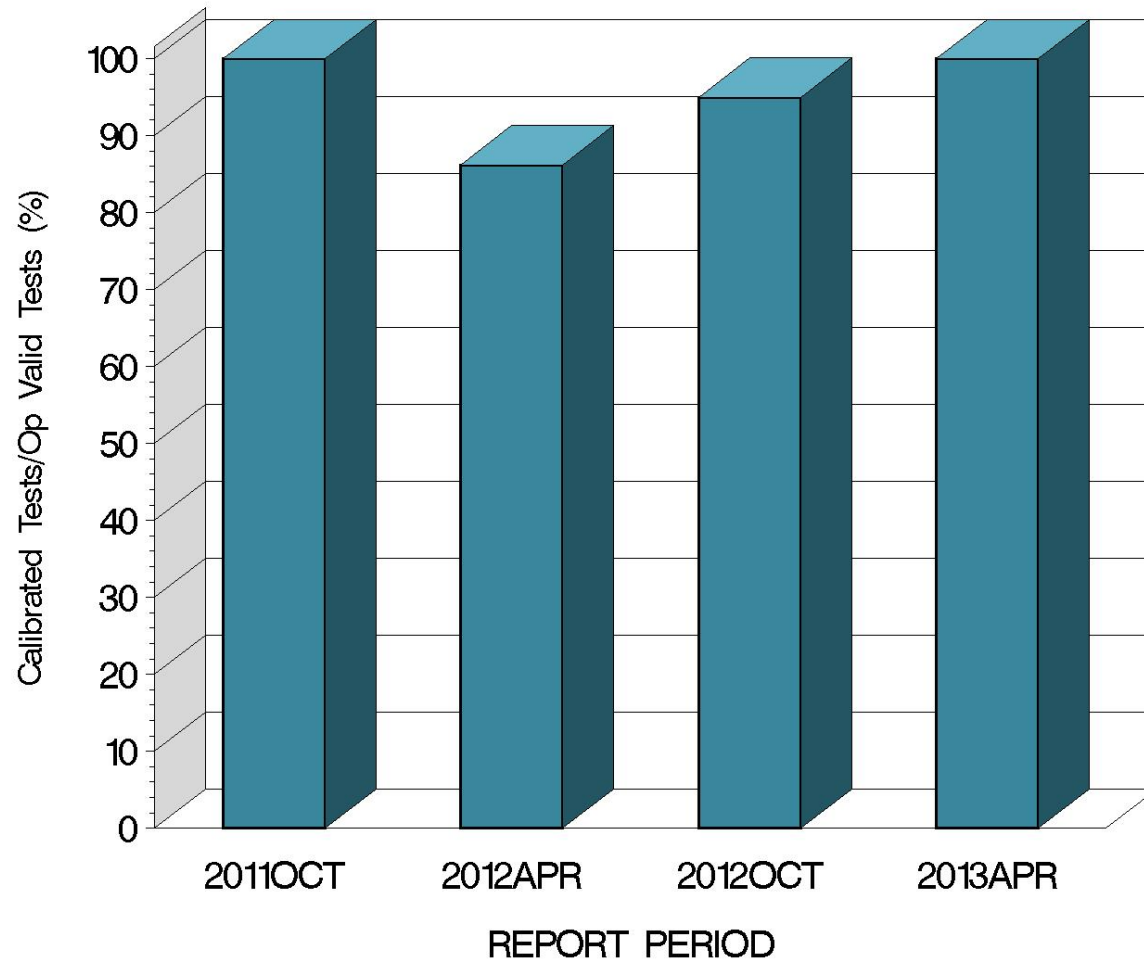
CALIBRATION ATTEMPT SUMMARY



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L-60-1 (D5704)

OPERATIONALLY VALID TESTS
MEETING ACCEPTANCE CRITERIA



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L-60-1 (D5704)

CAUSES FOR LOST TESTS

		Oil		Validity			Loss Rate		
Lab	Cause	148-1	151-2	RC	LC	XC	Lost	Starts	%
B	O-ring oil leak	•				•	1	7	14%
D	Oil temp %out > 5% and loose RPM pickup connection	•			•		3	10	30%
	Data acquisition failure		•		•				
	Load control problem		•			•			
		Lost	2	2	0	2	2		
		Starts	13	11	24	24	24		
		%	15%	18%	0%	8%	8%		

L-60-1 (D5704)

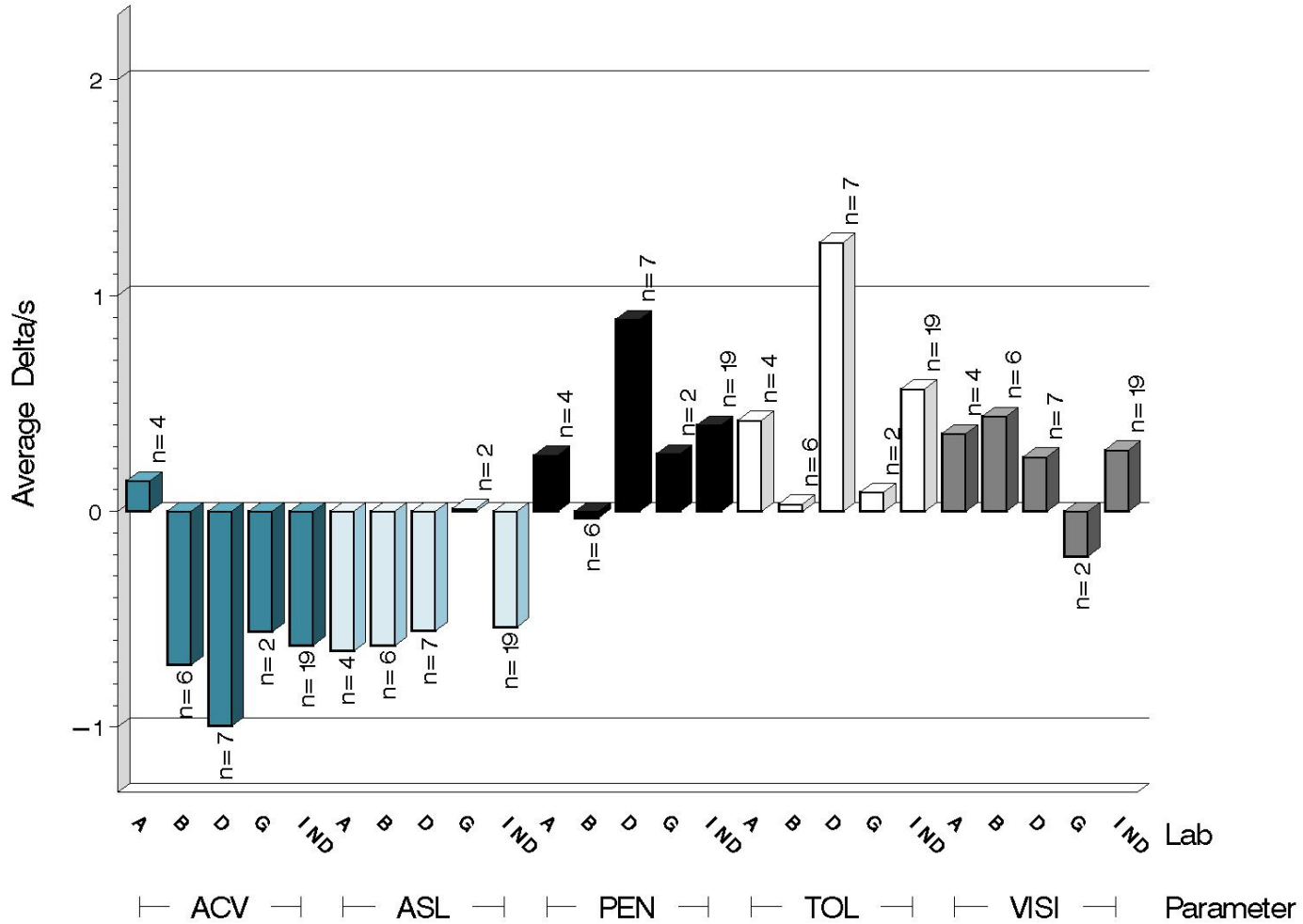
Average Δ /s by Lab						
Lab	n	VISI	PEN	TOL	ACV	ASL
A	4	0.360	0.260	0.423	0.141	-0.647
B	6	0.441	-0.032	0.034	-0.712	-0.623
D	7	0.251	0.888	1.247	-0.995	-0.555
G	2	-0.210	0.267	0.087	-0.559	0.013
Industry	19	0.285	0.400	0.568	-0.621	-0.536
Shift*	19	2.308	0.250	0.426	-0.546	-0.054

*computed using severity adjustment standard deviation

L-60-1 (D5704)

TEST SEVERITY

DELTA/S BY LAB

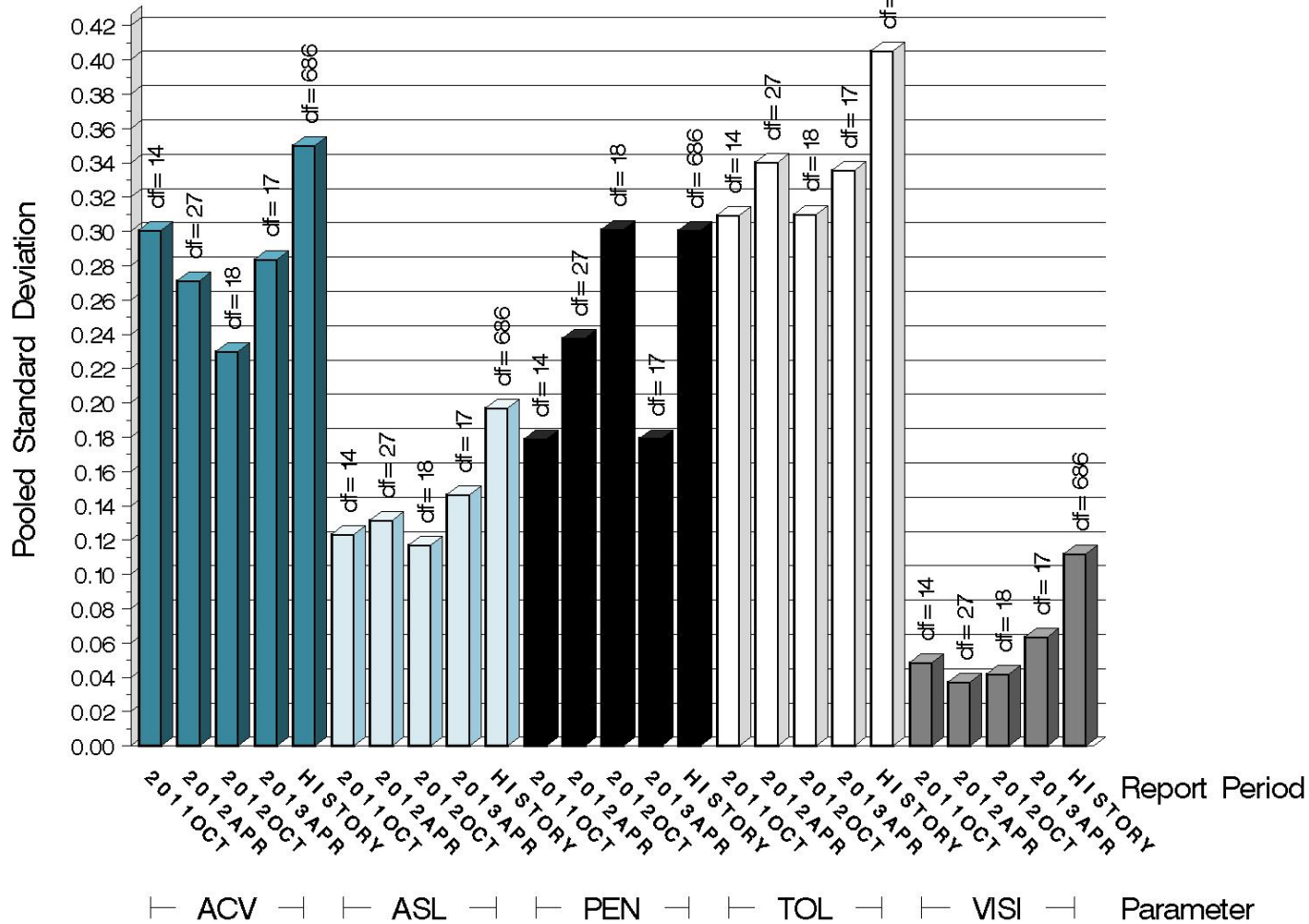


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L-60-1 (D5704)

TEST PRECISION

POOLED STANDARD DEVIATION
BY SIX-MONTH ASTM REPORT PERIOD



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L-60-1 (D5704)

SUMMARY OF SEVERITY & PRECISION

Severity

All parameters continue to be more or less severe of target. Test targets currently in use may not be representative of actual current test performance. This was brought to the surveillance panel's attention during a May 9, 2012 meeting. They decided against making any target changes at that time.

Precision

Precision for all parameters continues to be good.

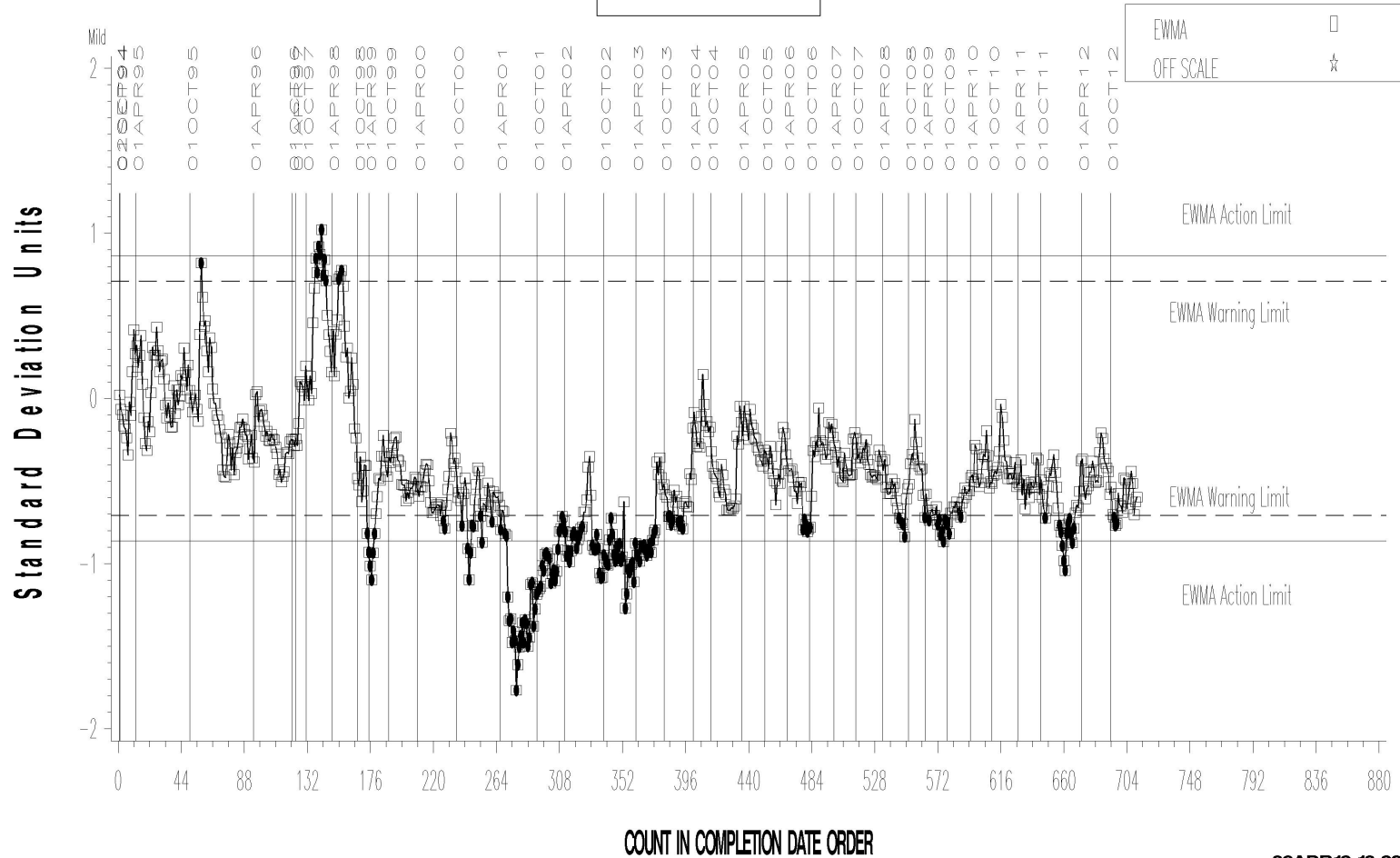
Industry control charts follow.

L-60-1 (D5704)

L-60-1 INDUSTRY OPERATIONALLY VALID DATA

REF. FINAL AVERAGE CARBON/ VARNISH

LTMS Severity Analysis



Severp

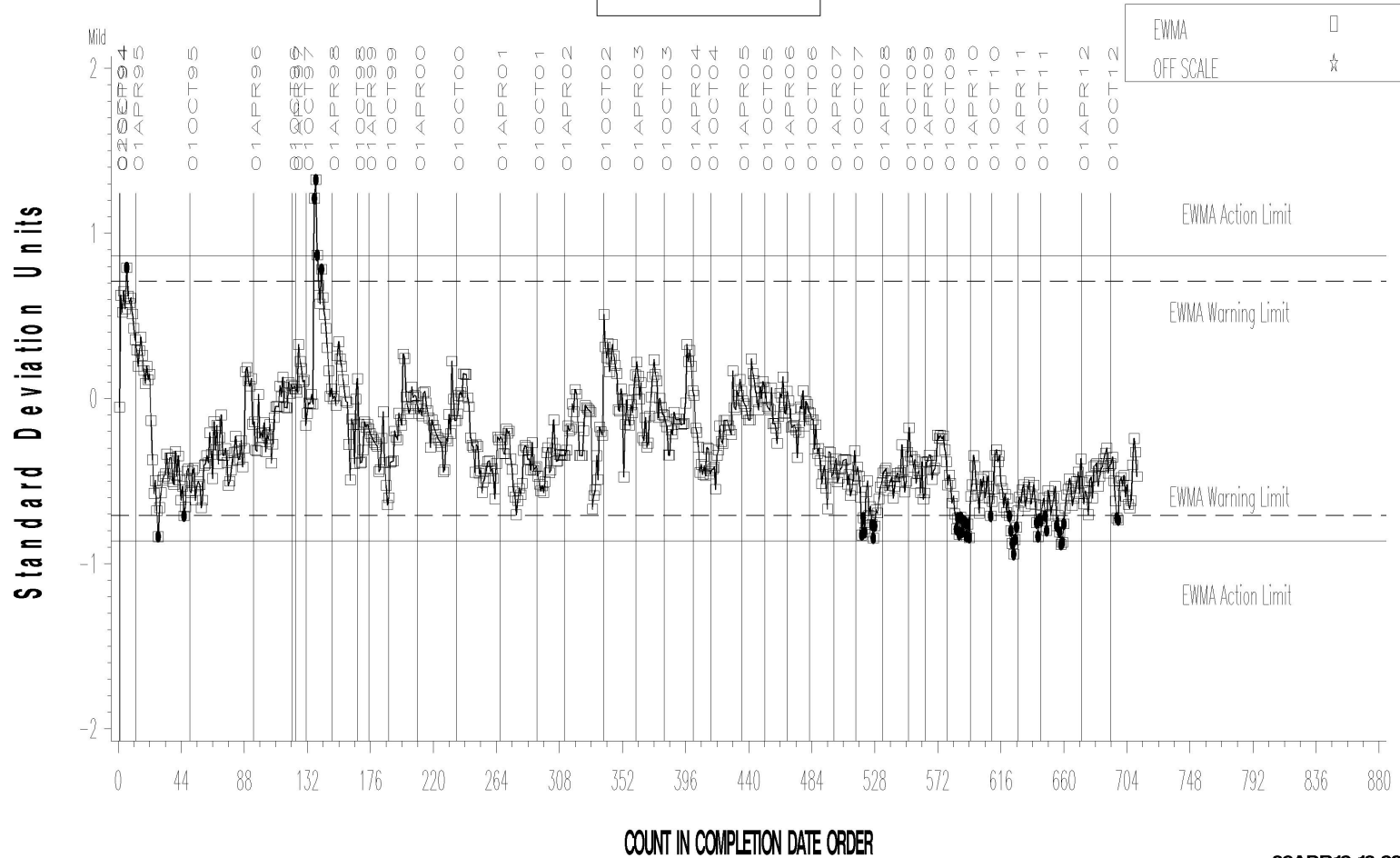
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L-60-1 (D5704)

L-60-1 INDUSTRY OPERATIONALLY VALID DATA

REF. FINAL AVERAGE SLUDGE

LTMS Severity Analysis



Severp

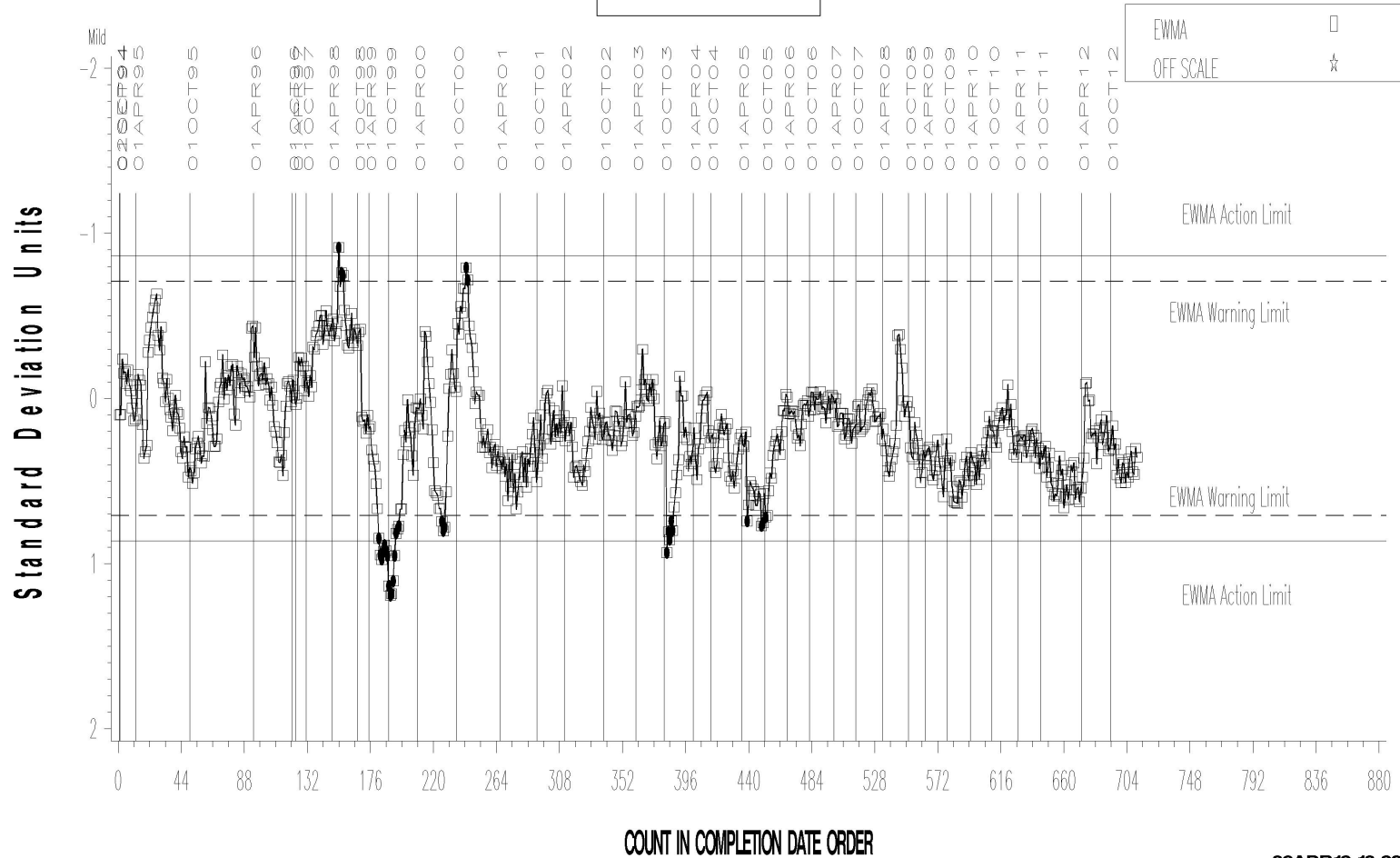
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L-60-1 (D5704)

L-60-1 INDUSTRY OPERATIONALLY VALID DATA

REF. FINAL PENTANE INSOLUBLES

LTMS Severity Analysis



Severp

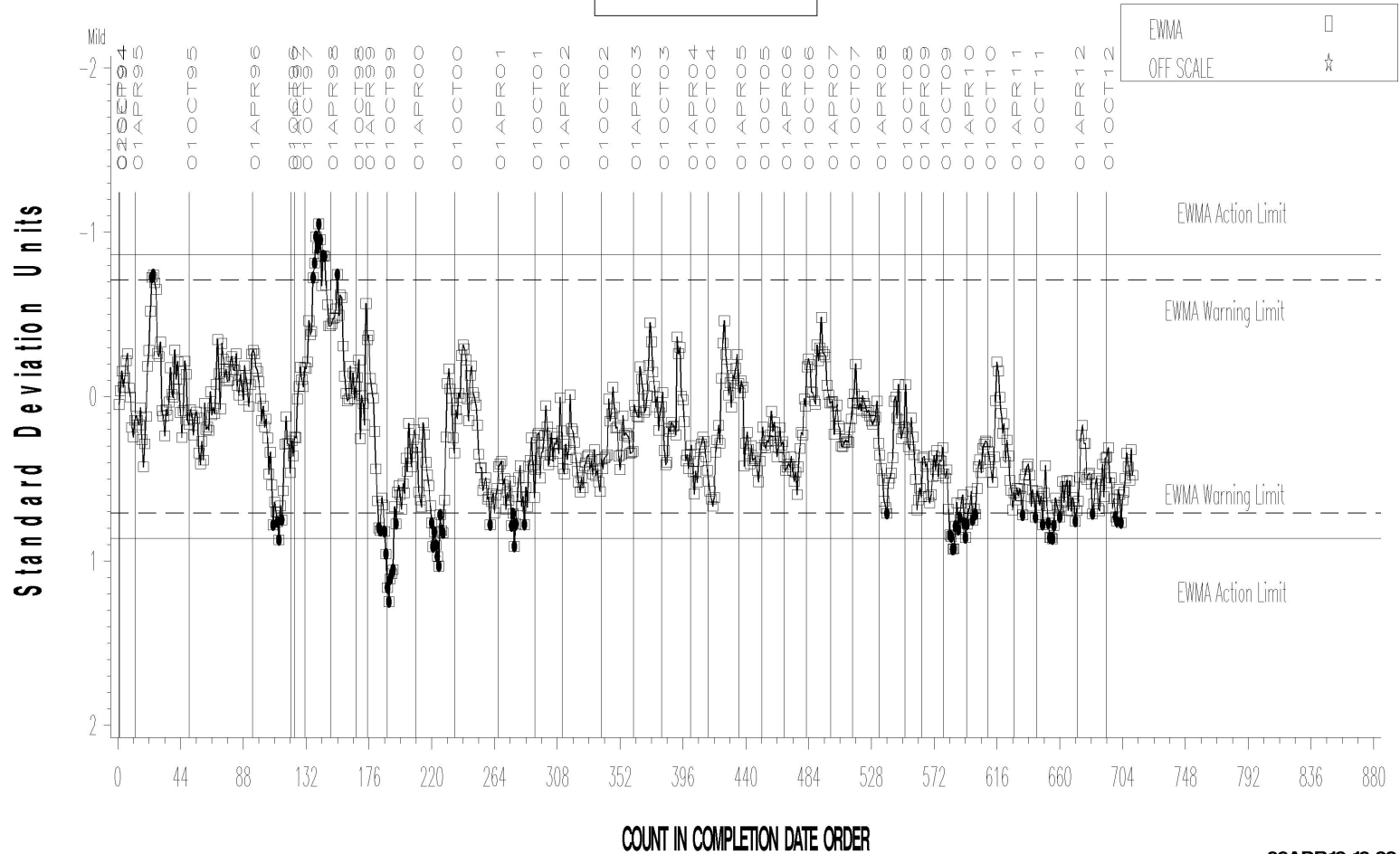
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L-60-1 (D5704)

L-60-1 INDUSTRY OPERATIONALLY VALID DATA

REF. FINAL TOLUENE INSOLUBLES

LTMS Severity Analysis



Severp

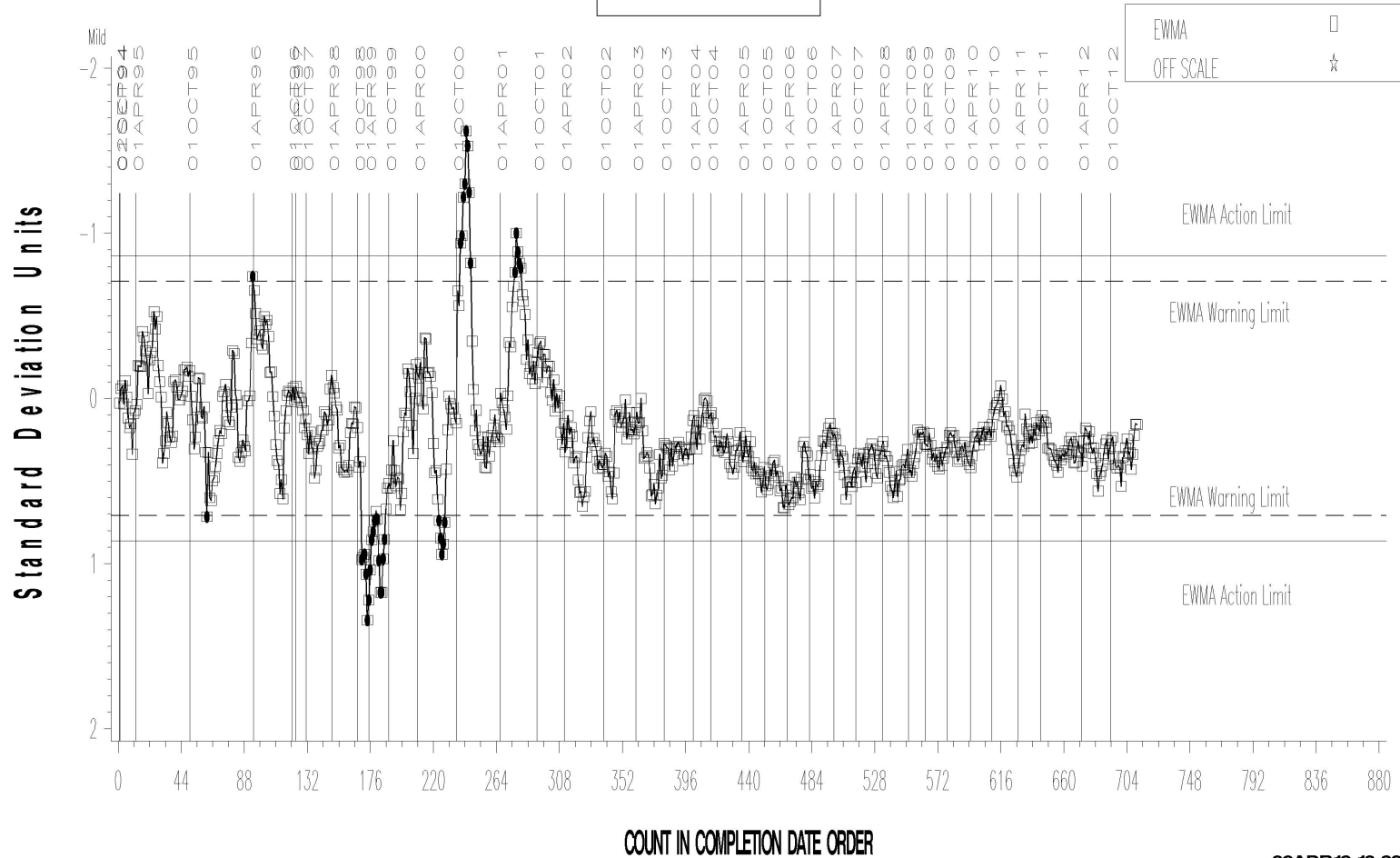
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L-60-1 (D5704)

L-60-1 INDUSTRY OPERATIONALLY VALID DATA

REF. FINAL VISCOSITY INCREASE

LTMS Severity Analysis



Severp

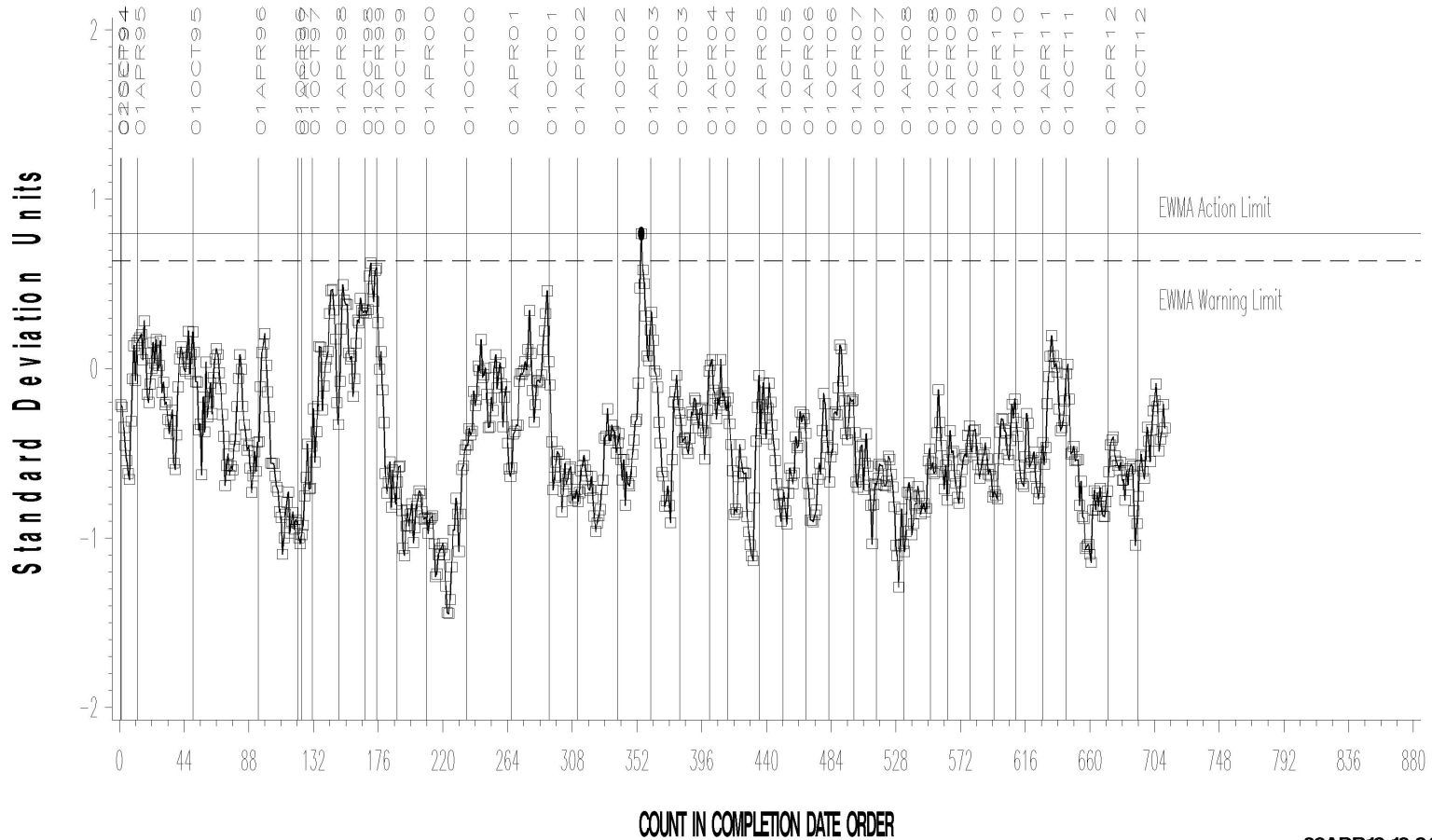
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L-60-1 (D5704)

L-60-1 INDUSTRY OPERATIONALLY VALID DATA

REF. FINAL AVERAGE CARBON/ VARNISH

LTMS Precision Analysis



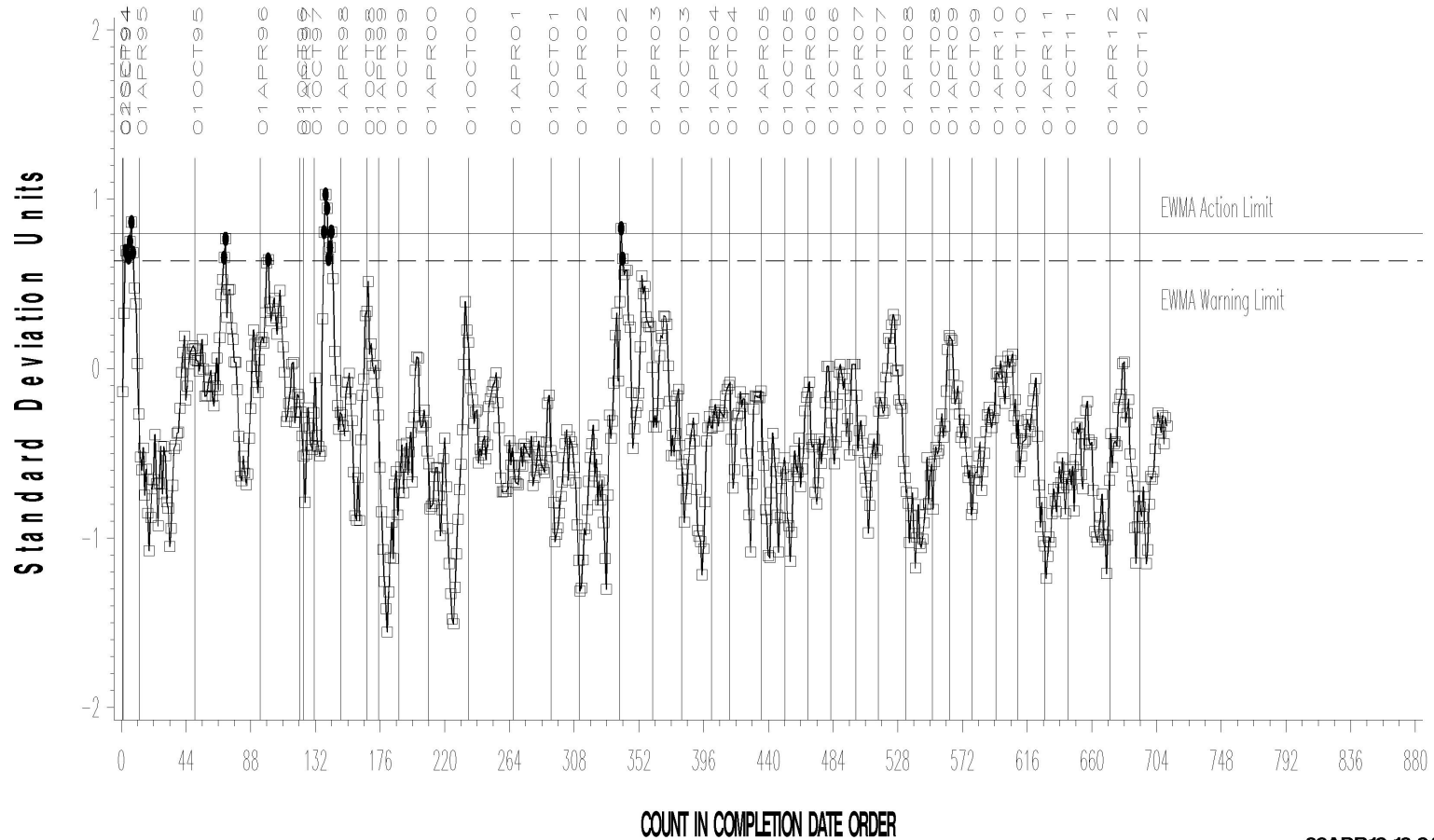
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L-60-1 (D5704)

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REF. FINAL AVERAGE SLUDGE

LTMS Precision Analysis



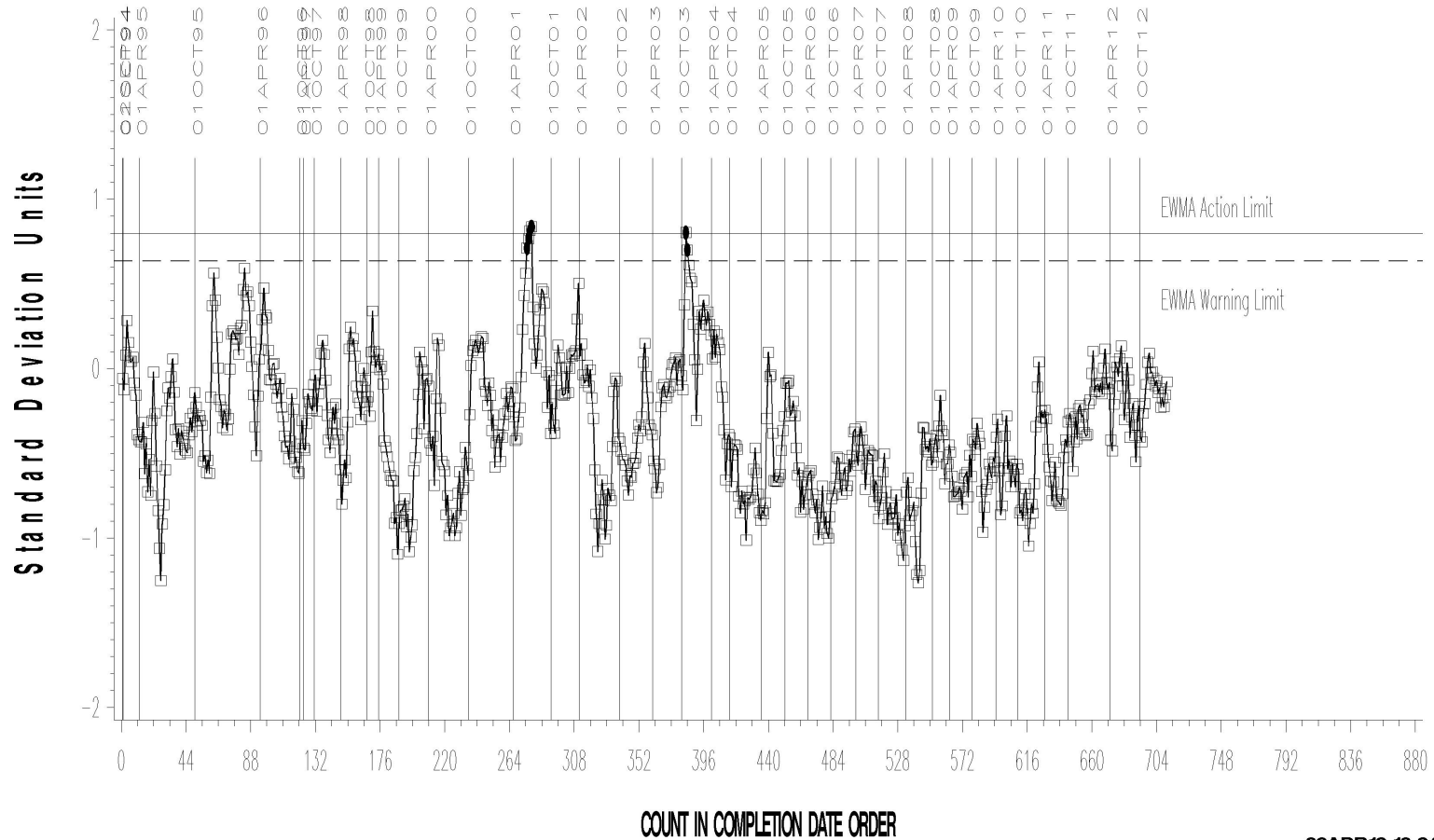
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L-60-1 (D5704)

L-60-1 INDUSTRY OPERATIONALLY VALID DATA

REF. FINAL PENTANE INSOLUBLES

LTMS Precision Analysis

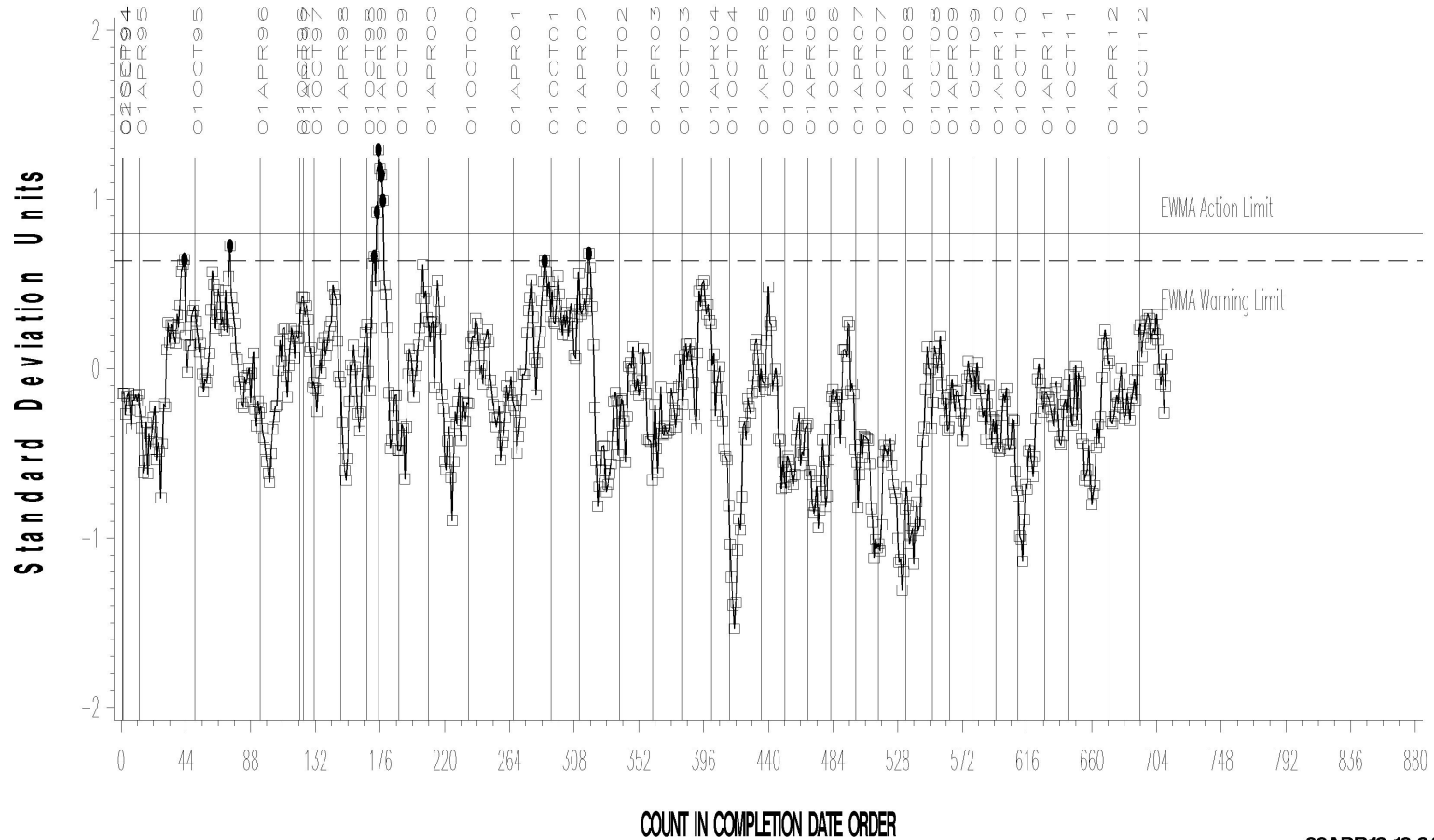


L-60-1 (D5704)

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REF. FINAL TOLUENE INSOLUBLES

LTMS Precision Analysis

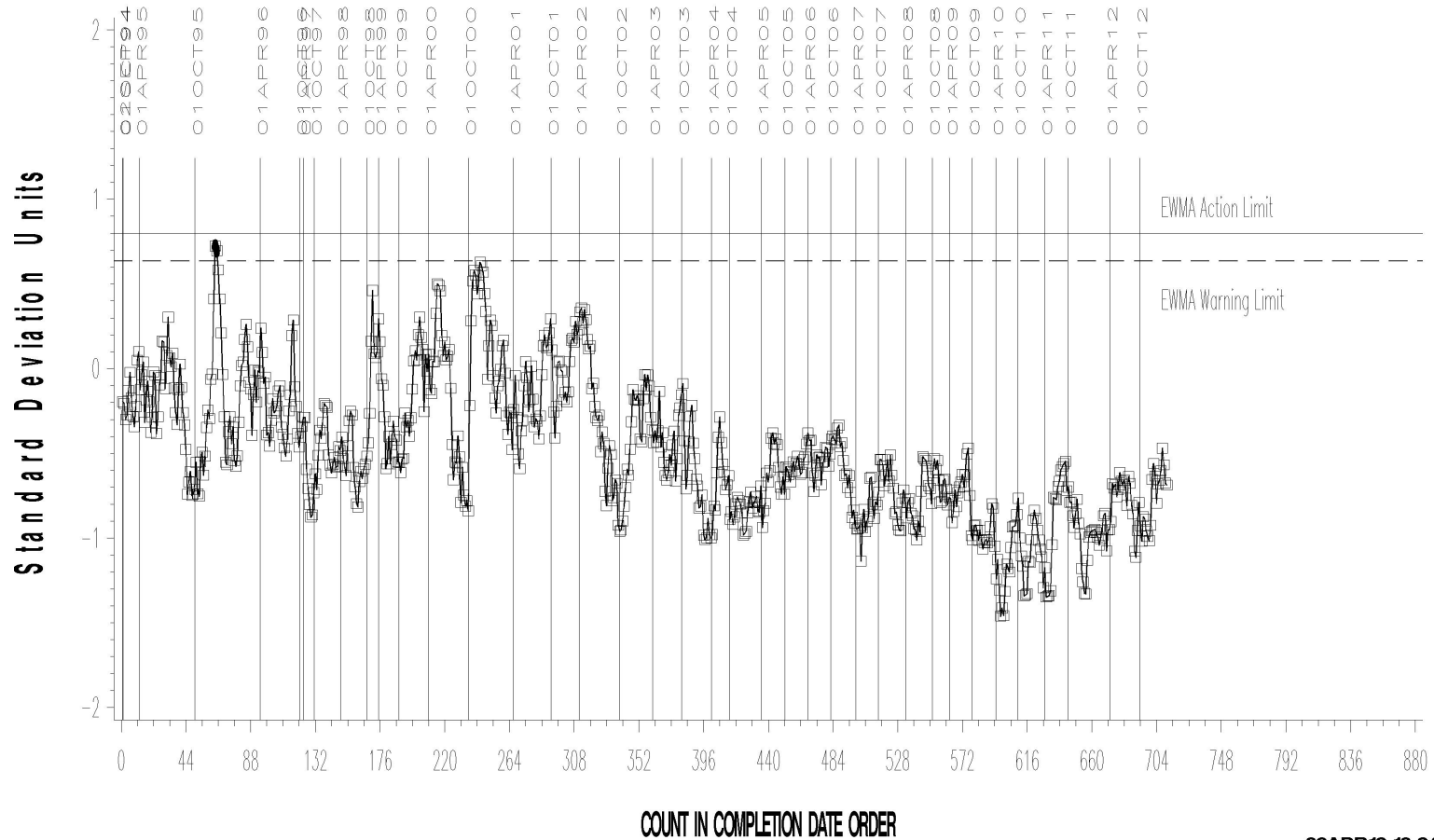


L-60-1 (D5704)

L-60-1 INDUSTRY OPERATIONALLY VALID DATA

REF. FINAL VISCOSITY INCREASE

LTMS Precision Analysis



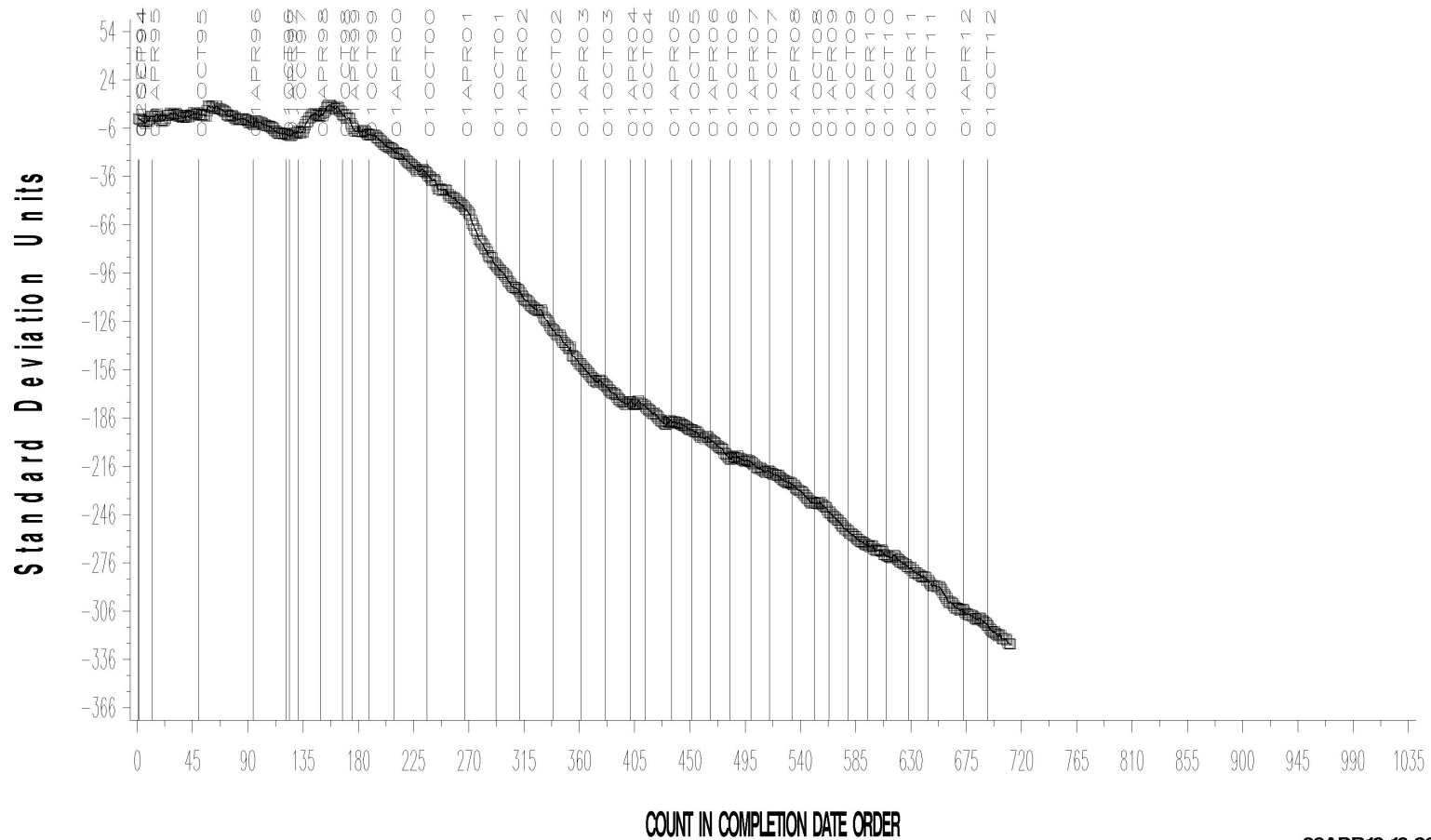
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L-60-1 (D5704)

L-60-1 INDUSTRY OPERATIONALLY VALID DATA

REF. FINAL AVERAGE CARBON/ VARNISH

CUSUM Severity Analysis



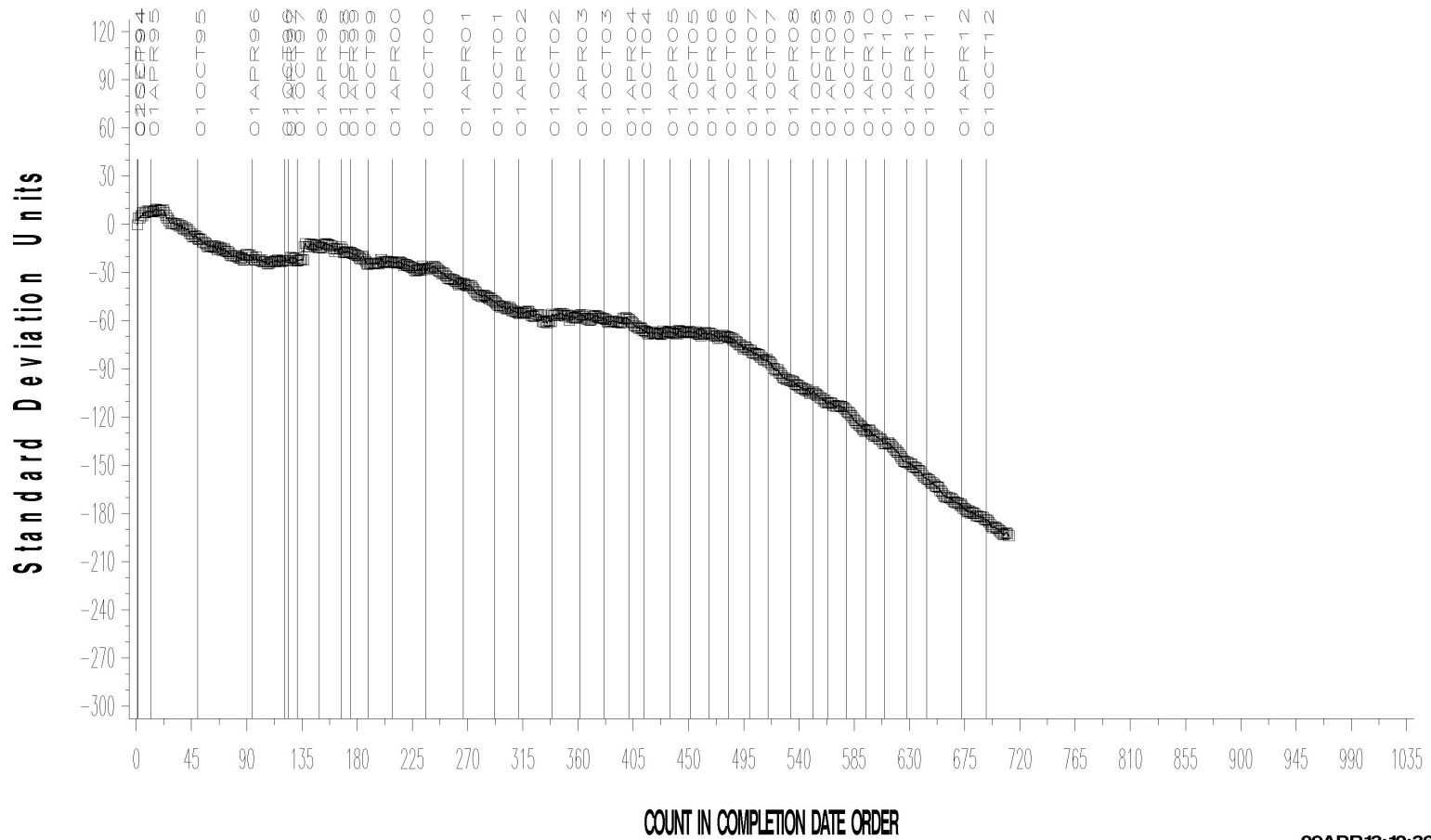
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L-60-1 (D5704)

L-60-1 INDUSTRY OPERATIONALLY VALID DATA

REF. FINAL AVERAGE SLUDGE

CUSUM Severity Analysis



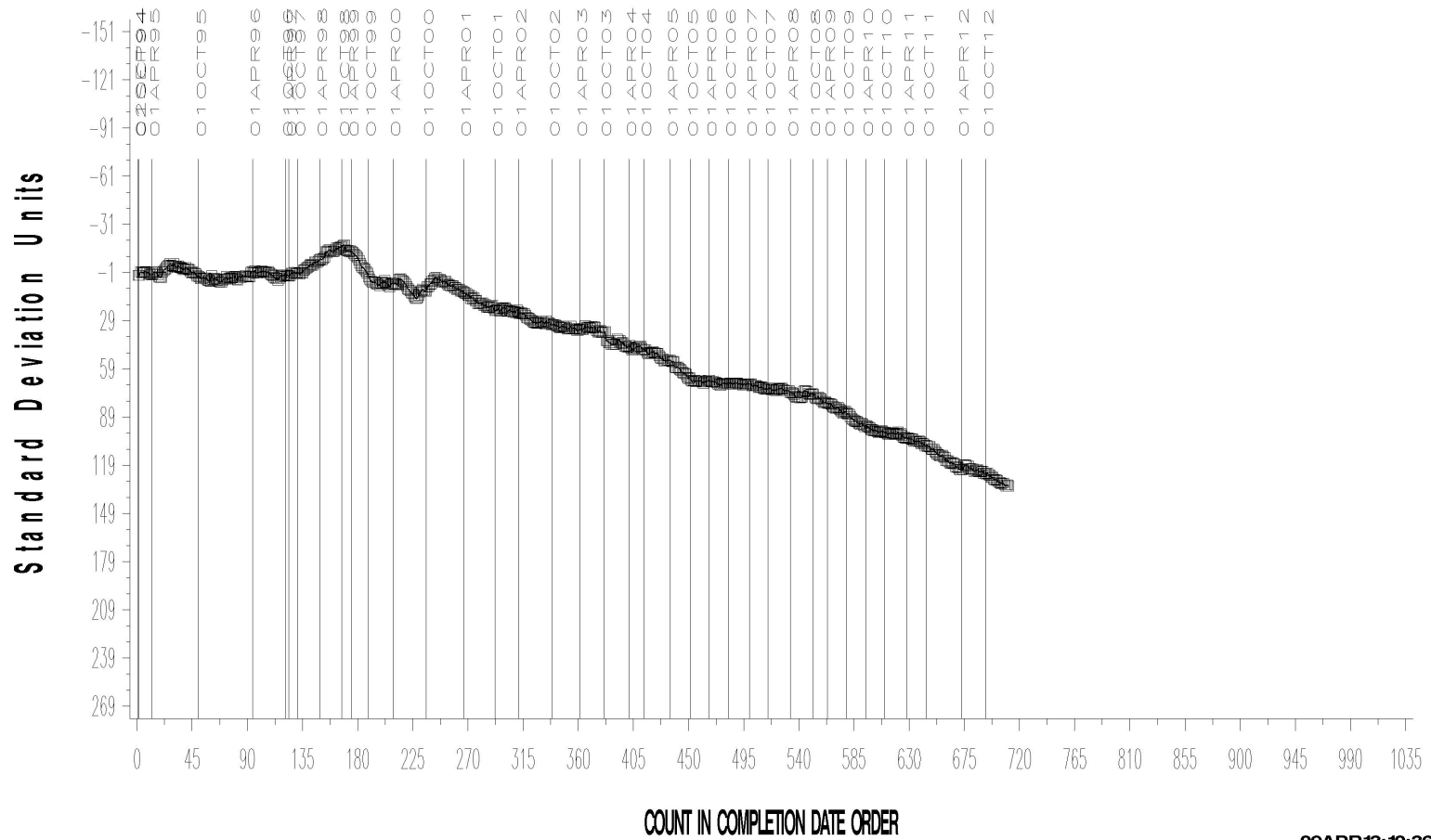
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L-60-1 (D5704)

L-60-1 INDUSTRY OPERATIONALLY VALID DATA

REF. FINAL PENTANE INSOLUBLES

CUSUM Severity Analysis



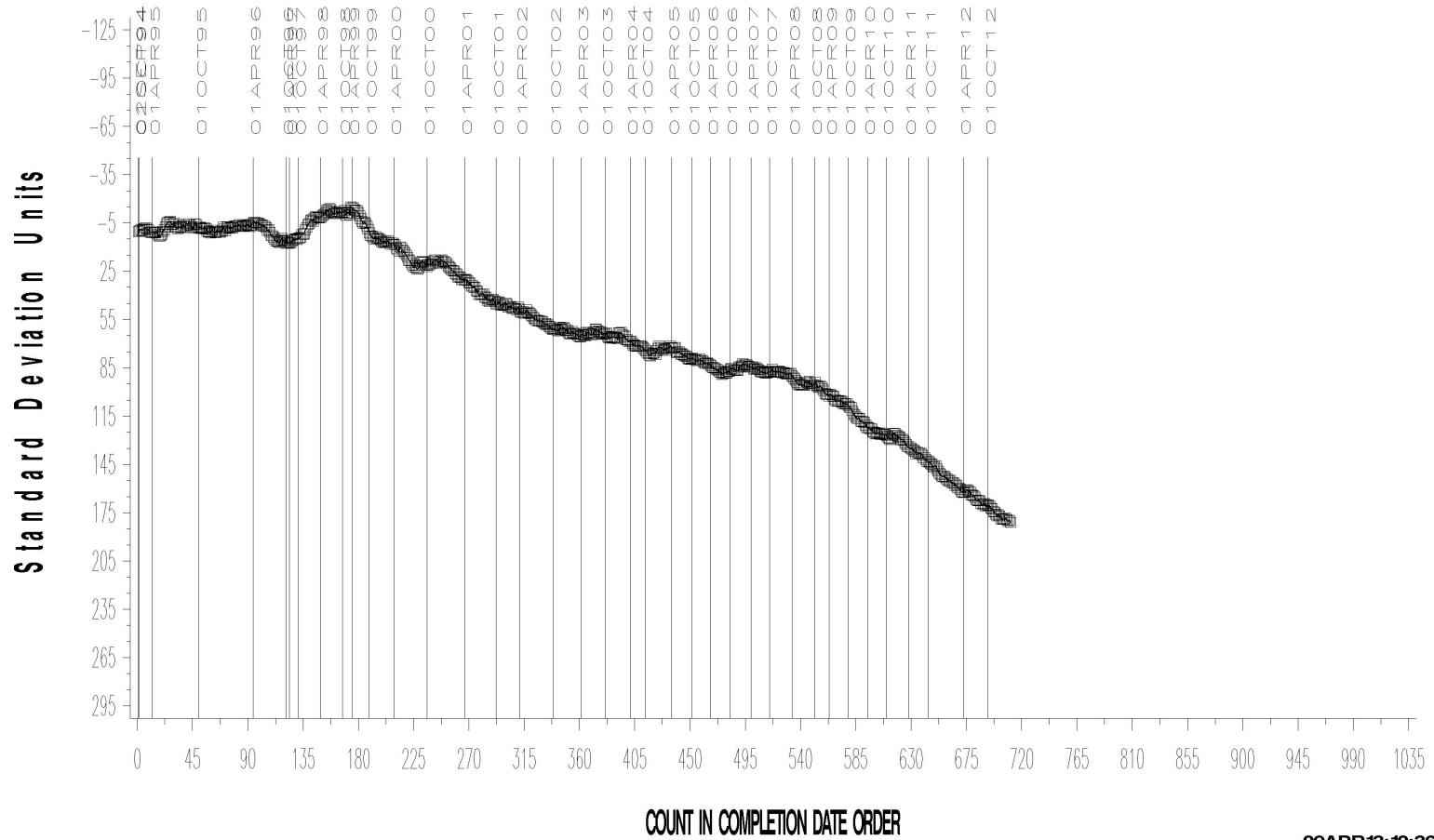
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L-60-1 (D5704)

L-60-1 INDUSTRY OPERATIONALLY VALID DATA

REF. FINAL TOLUENE INSOLUBLES

CUSUM Severity Analysis



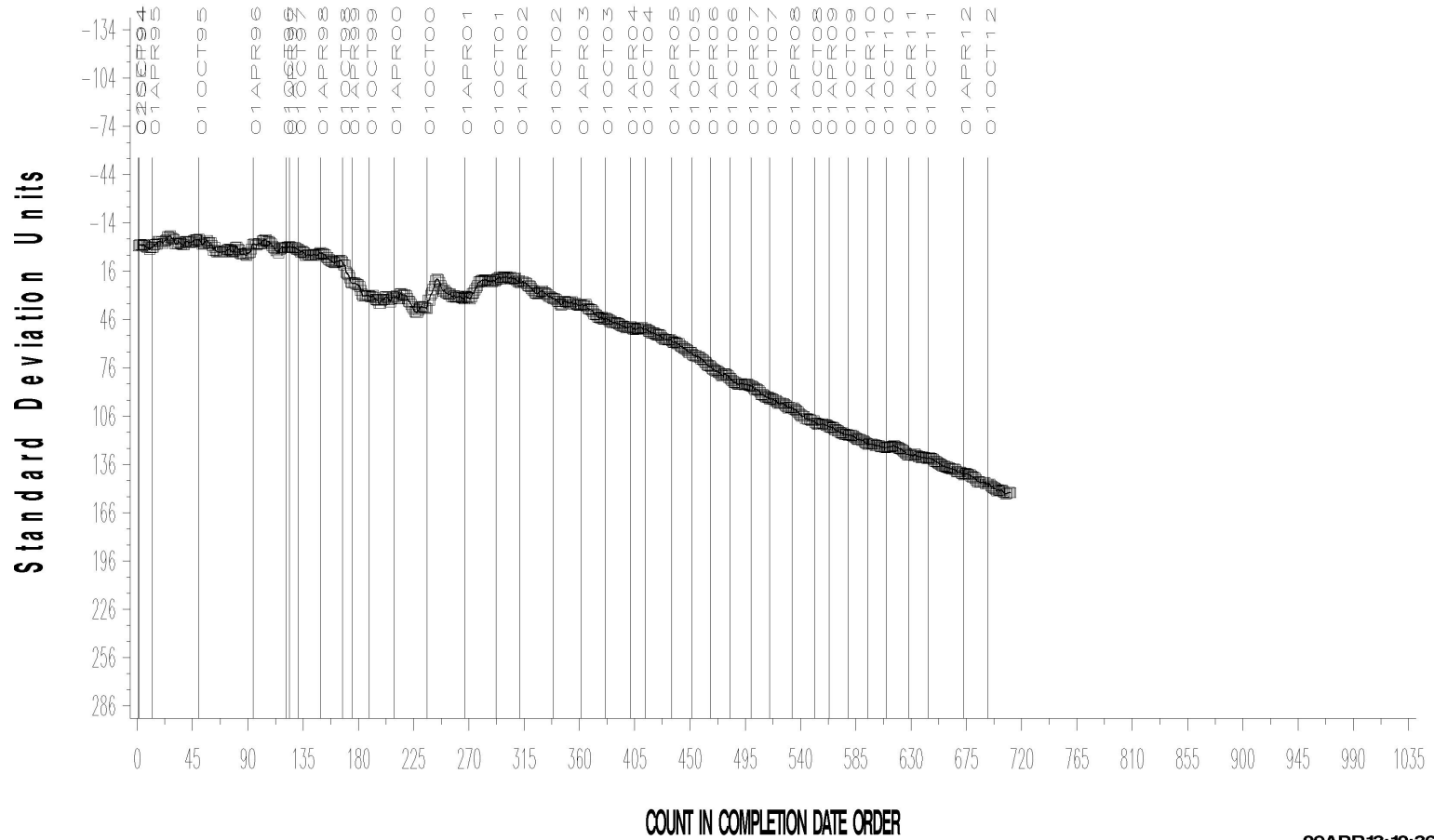
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L-60-1 (D5704)

L-60-1 INDUSTRY OPERATIONALLY VALID DATA

REF. FINAL VISCOSITY INCREASE

CUSUM Severity Analysis



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L-60-1 (D5704)

TIMELINE ADDITIONS

Effective Date	Information Letter	Event
20130801	13-1	Require use of rating jig.

L-60-1 (D5704)

LAB VISITS

One L-60-1 lab visit was conducted during this period. No deficiencies were found.

INFORMATION LETTERS

Information Letter 13-1 was issued on March 1, 2013. In addition to requiring the use of the rating jig for tests conducted after August 1, this letter updated the supplier ordering information for the Screen-Kut sanding media and corrected the name of rating manual 20.

L-60-1 (D5704)

STATUS OF REFERENCE OIL SUPPLY

Oil	Cans @ Labs	@ TMC	
		Cans	Gallons
133	5	1693	105.8
148-1	21	540	33.8
151-2	22	53	3.3
Total	48	2286	142.9

A reblend of 151-2 (151-3) was acquired by TMC in 1999 but has since been consumed in other test types. That oil was then replaced by 155 which is also nearly depleted. A 155 reblend (155-1) is on hand at TMC and will be available for L-60-1 testing when the need arises. TMC inventory records indicate that 3.3 gallons of 151-2 remain. While this does provide oil for 53 tests, be advised that quantities that low can unexpectedly be depleted by even minor spills or transfer losses. The panel is advised to begin thinking about an introduction plan for 155-1. Five hundred and forty tests of oil 148-1 remain in TMC inventory; however, this is only 33.8 gallons. When the need arises, it will not be possible to obtain a reblend of this oil. The panel may also want to begin considering a possible replacement for this oil.