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Test Monitoring Center

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

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

MEMORANDUM: 16-018

DATE: May 31, 2016

TO: Gil Reinhard, Chairman, CBT Surveillance Panel

FROM: Michael T. Kasimirsky

SUBJECT: HTCBT Testing from October 1, 2015 through March 31, 2016

A total of 327 HTCBT tests were reported to the Test Monitoring Center during the report period from October 1, 2015 through March 31, 2016.

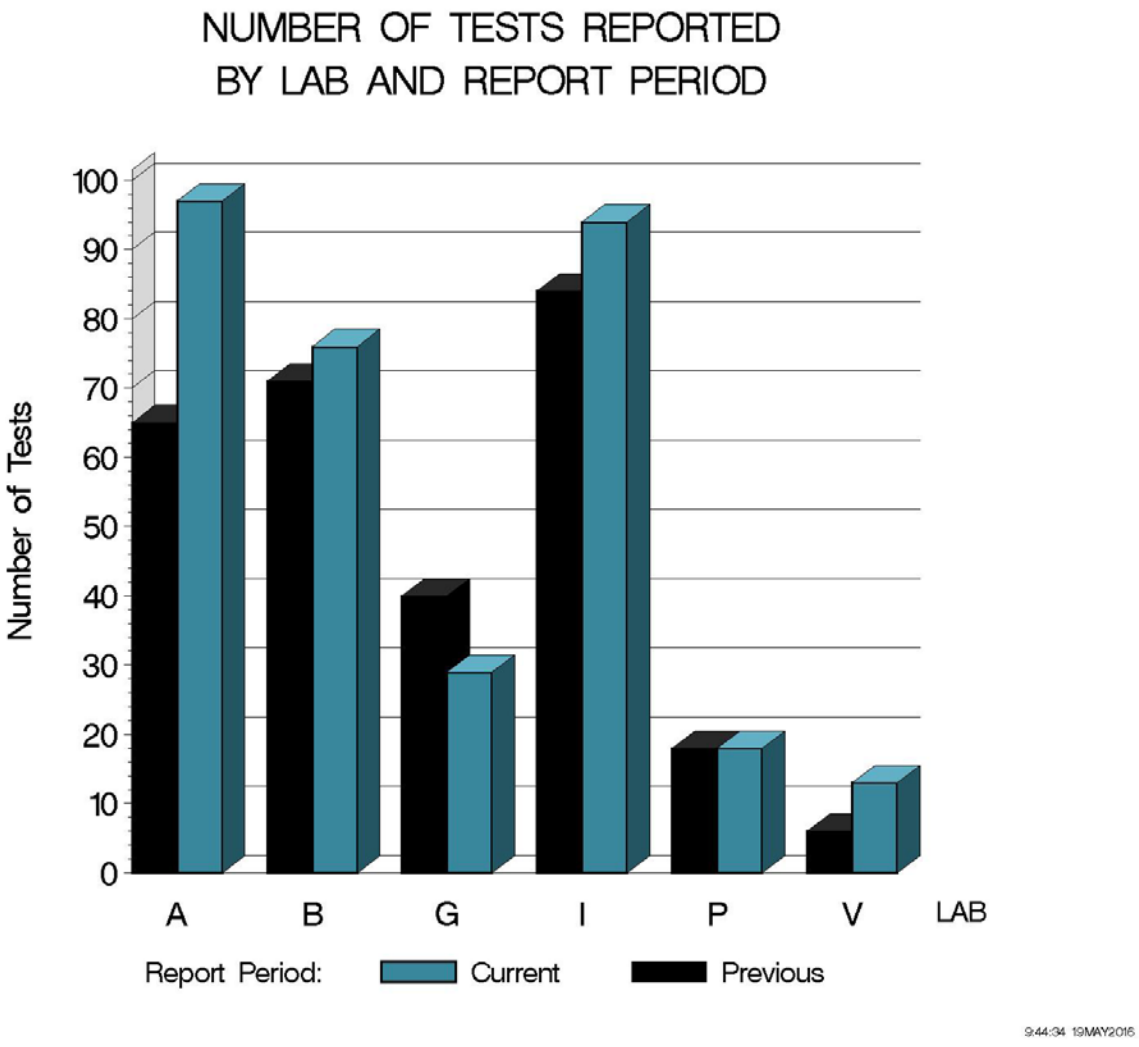
Please find attached a summary of testing activity this period.

MTK/mtk/astm0416.doc/mem16-018.mtk.doc
cc: F. M. Farber
J. A. Clark
CBT Surveillance Panel
ftp://ftp.astmtmc.cmu.edu/docs/bench/htcbt/semiannualreports/htcbt-04-2016.pdf

Distribution: email

HTCBT (D 6594)

	Reporting Data
Number of Labs	6

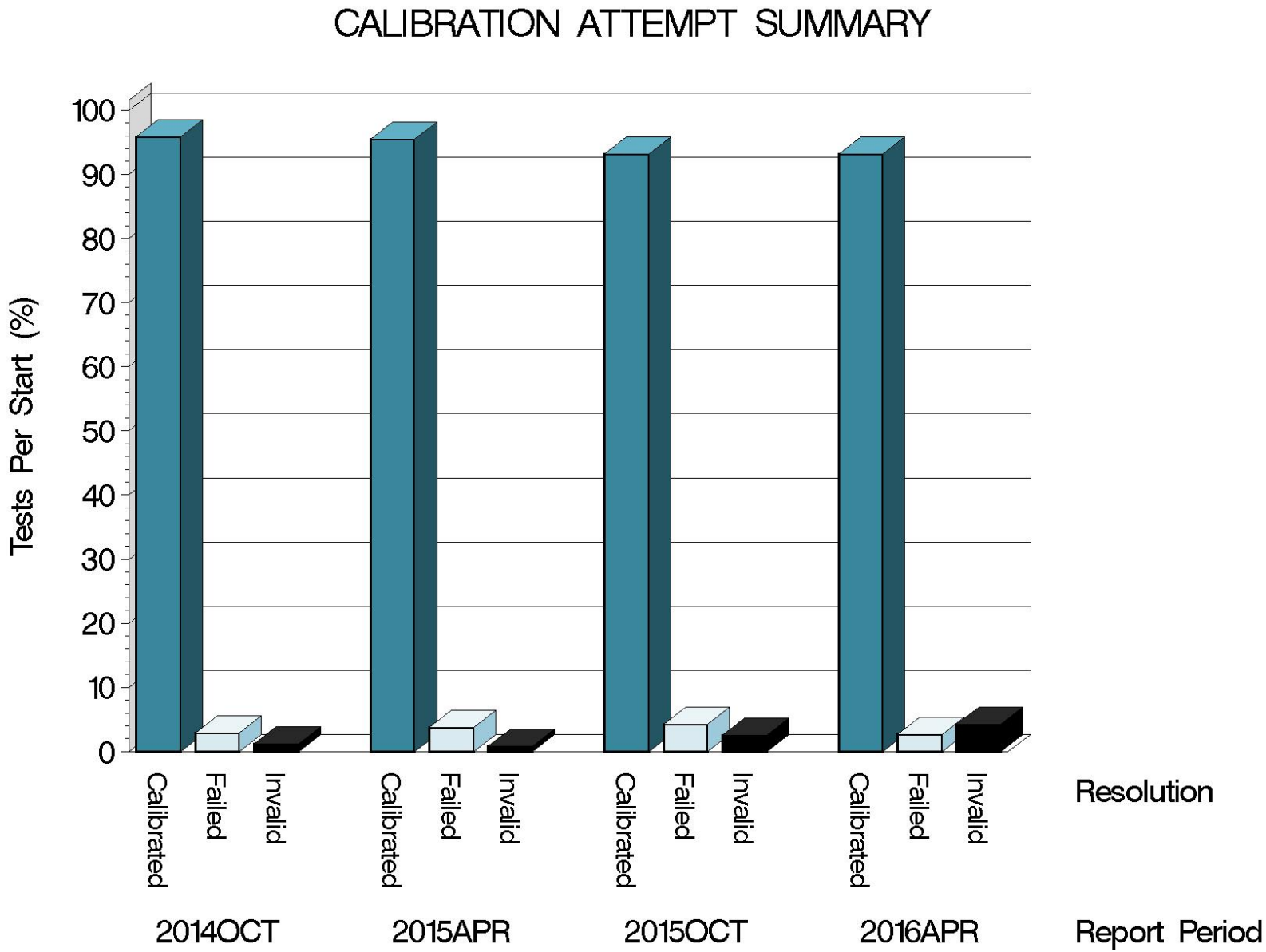


HTCBT (D 6594)

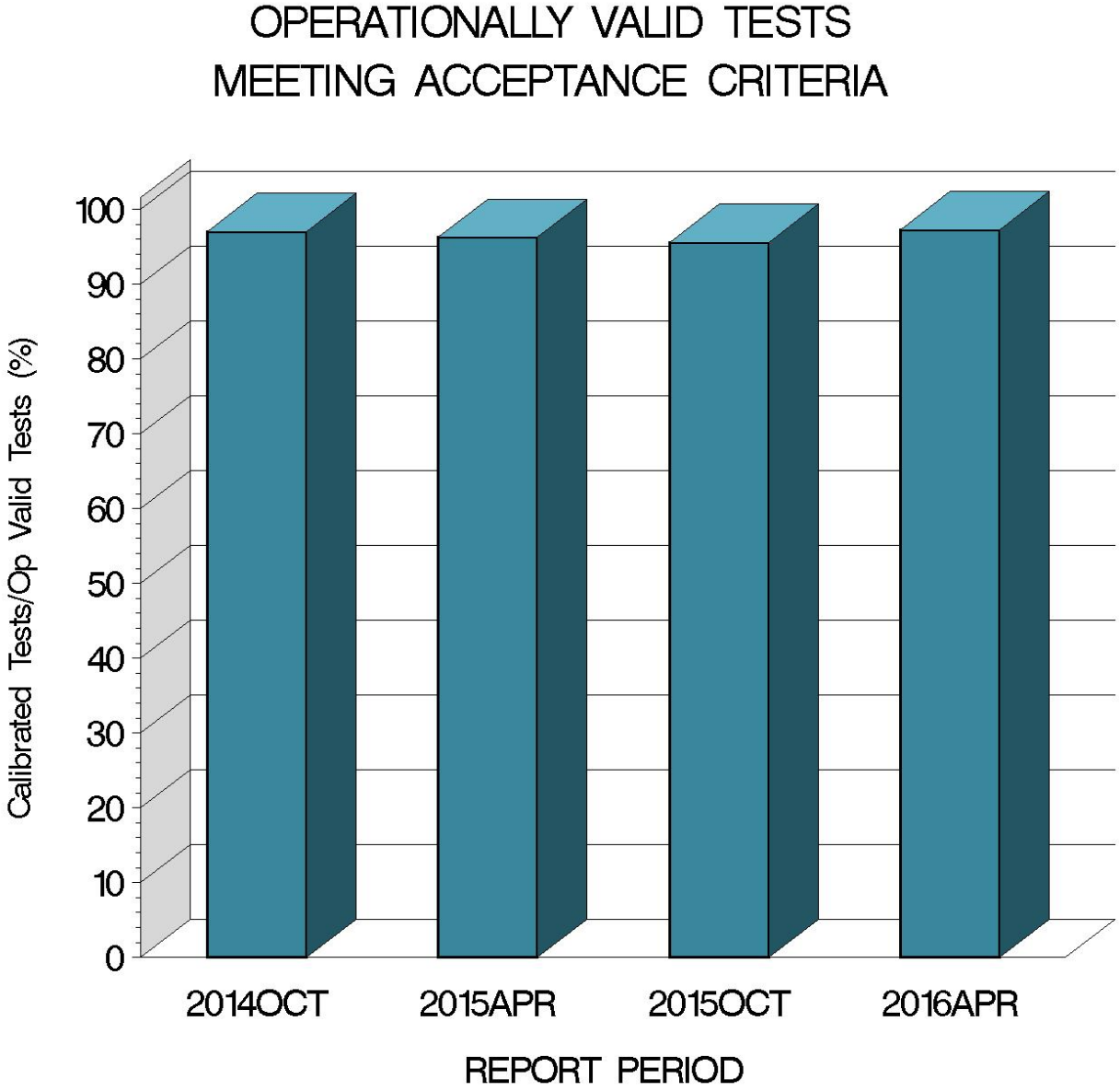
Test Distribution by Validity

		Number of Tests
Acceptable Calibration Test	AC	284
Unacceptable Calibration Test	OC	8
Invalid Calibration Test	LC	9
Aborted Calibration Test	XC	4
Acceptable Donated Test	NI	12
Invalid Donated Test	LI	5
Aborted Shakedown Run	XS	2
Unacceptable Shakedown Run	OS	2
Invalid Shakedown Run	LS	1
Total		327

HTCBT (D 6594)


CALIBRATION ATTEMPT SUMMARY
Tests Per Start (%)
100
90
80
70
60
50
40
30
20
10
0
Calibrated
Failed
Invalid
Calibrated
Failed
Invalid
Calibrated
Failed
Invalid
Calibrated
Failed
Invalid
Resolution
2014OCT
2015APR
2015OCT
2016APR
Report Period
9:44:34 19MAY2016

HTCBT (D 6594)



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HTCBT (D 6594)

CAUSES FOR LOST TESTS

Summary of Reasons for Failed Tests	No. of Tests
Copper, severe	2
Copper, mild	0
Lead, severe	0
Lead, mild	0
Copper, mild, & Lead, severe	1
Copper & Lead, mild	1
Copper & Lead, severe	4

HTCBT (D 6594)

CAUSES FOR LOST TESTS (CONTINUED)

Summary of Reasons for Invalid Tests	No. of Tests
Airflow Problem	3
Operator Error	5
Power Failure	1

HTCBT (D 6594)

CAUSES FOR LOST TESTS (CONTINUED)

Summary of Reasons for Aborted Tests	No. of Tests
Heater Failure	1
Mechanical Failure	1
Sponsor Request	2

HTCBT (D 6594)

Average Δ/s By Laboratory			
Lab	n	CUC	PBC
A	90	0.936	0.660
B	73	0.517	-0.257
G	10	-1.020	1.127
I	91	-0.009	-0.049
P	18	1.308	-0.023
V	10	0.669	0.333
Industry	292	0.484	0.173

Individual test results can be found on the TMC Web Page at the following link:

ftp://ftp.astmtmc.cmu.edu/refdata/bench/htcbt/data/

HTCBT (D 6594)

HIGH TEMP CBT INDUSTRY OPERATIONALLY VALID DATA

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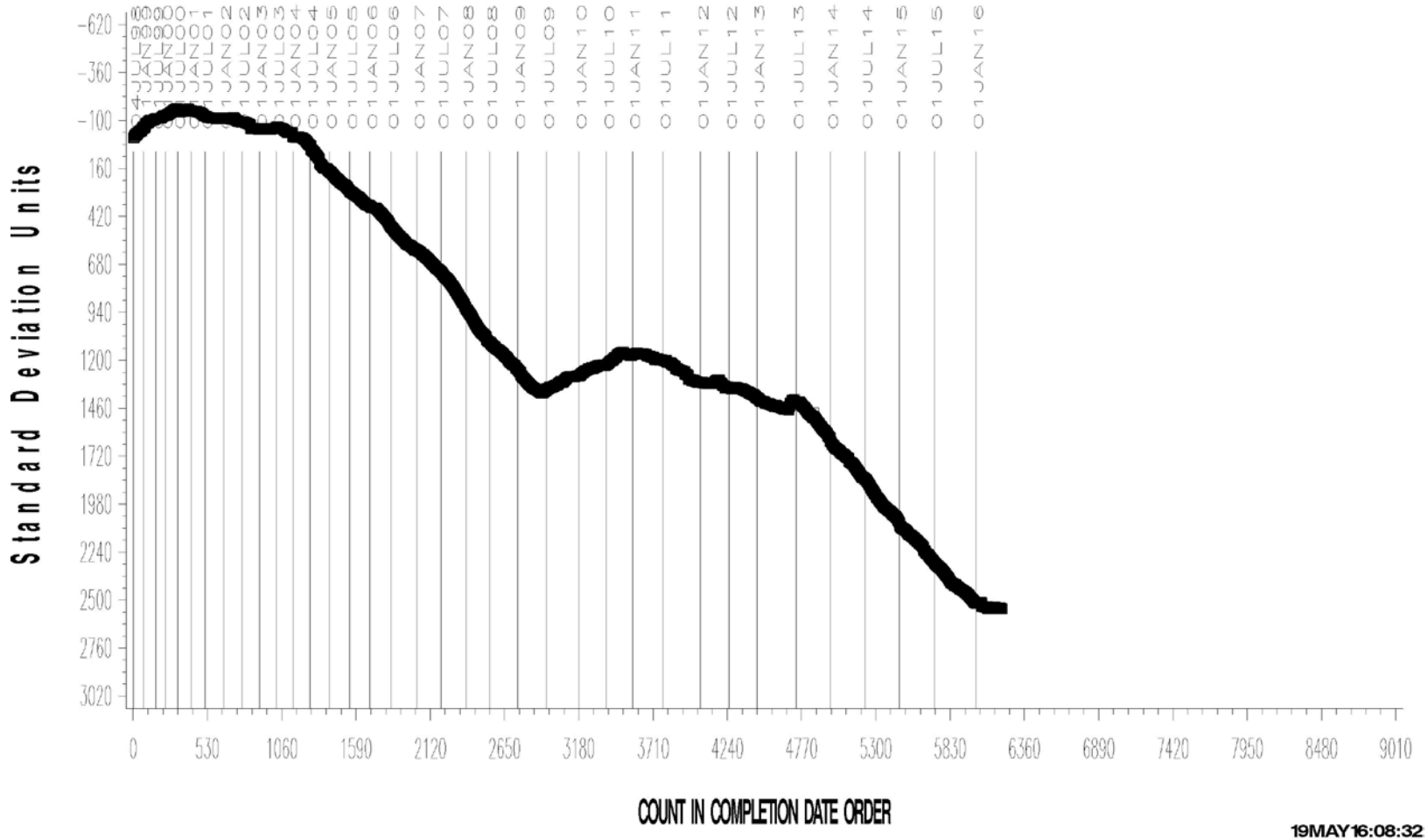
COPPER CHANGE (ppm)

CUSUM Severity Analysis



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HTCBT (D 6594)

HIGH TEMP CBT INDUSTRY OPERATIONALLY VALID DATA

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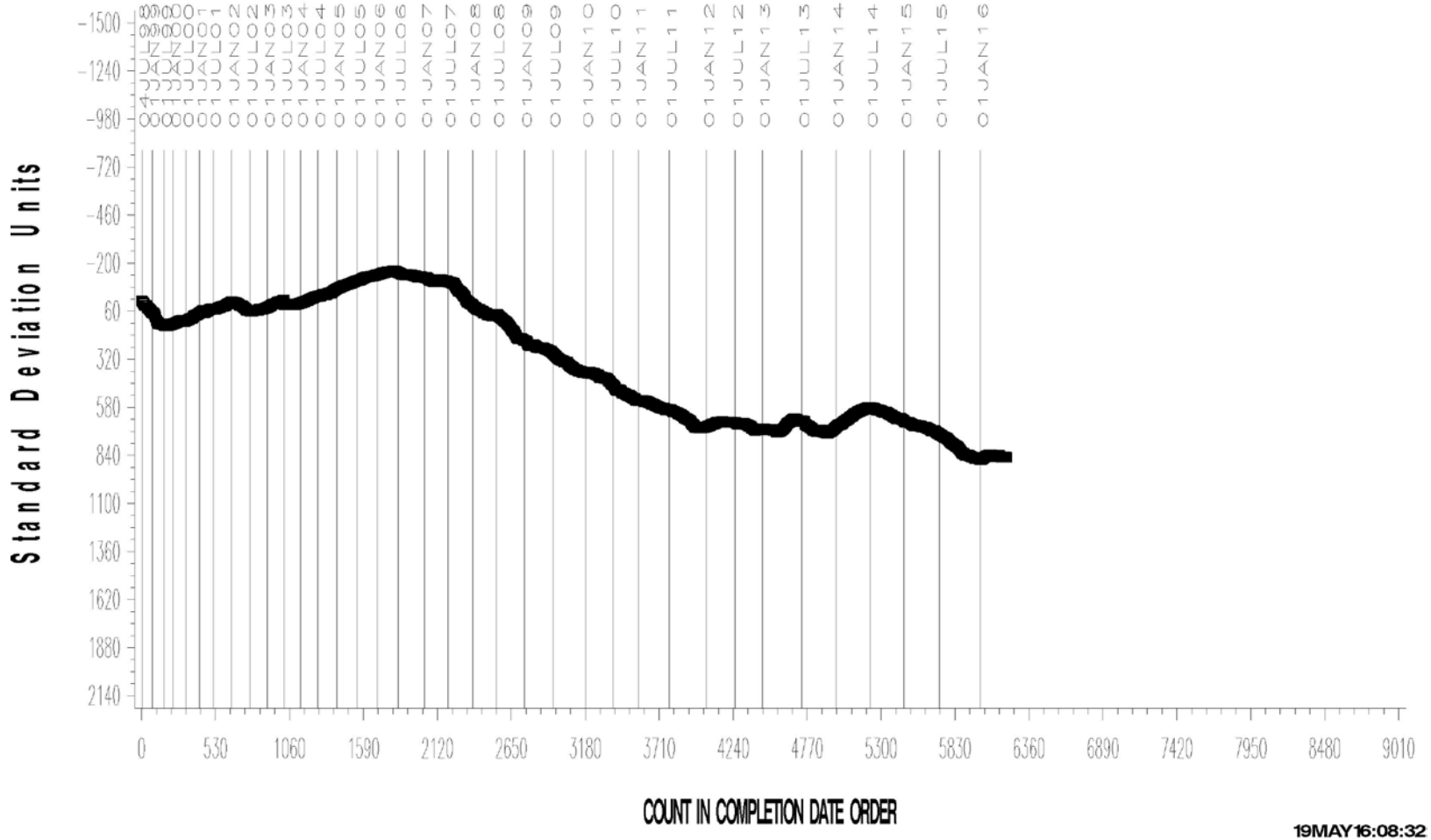
LEAD CHANGE (ppm)

CUSUM Severity Analysis



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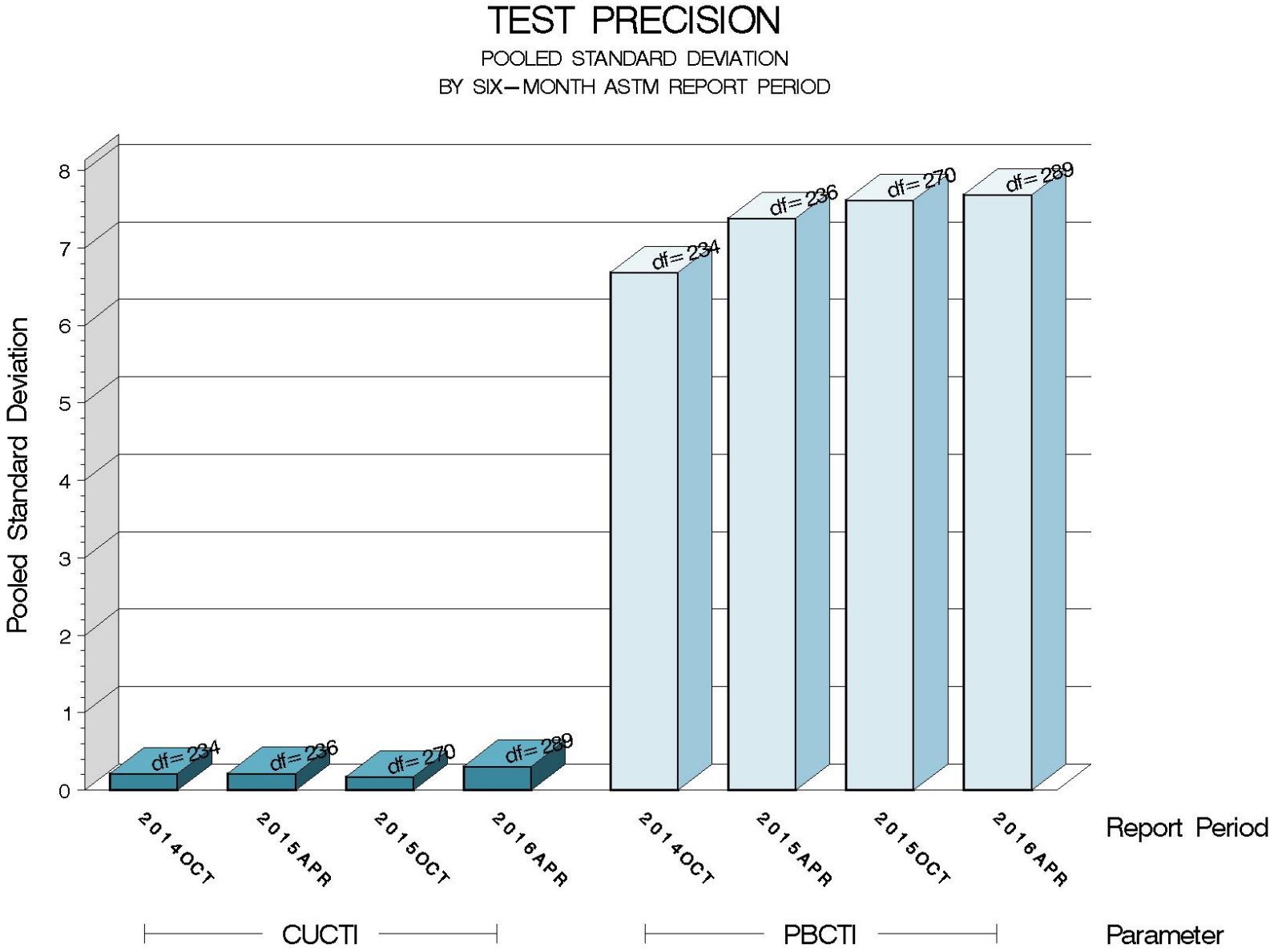
HTCBT (D 6594)



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HTCBT (D 6594)

SUMMARY OF SEVERITY & PRECISION

Severity
Over the course of this report period, copper severity, as measured by cusum plotting, was severe. Over the course of this report period, lead severity, as measured by cusum plotting, was severe.

Precision
Pooled s for this period is 0.31 for copper and 7.68 for lead. Over the course of this report period, Precision, as measured by pooled standard deviation, is slightly worse than last period for both copper and lead concentration, but is still within historical levels.

HTCBT (D 6594)

INFORMATION LETTERS
No HTCBT Information Letters were issued this period.

HTCBT (D 6594)

STATUS OF REFERENCE OIL SUPPLY

		@ TMC	
Reference Oil	Samples @ Labs	Samples (4 oz)	Gallons
44-1	0	0	0.0
44-2	0	0	0.0
44-3	58	0	0.0
44-4	94	1609	50.3
1005-1	0	0	0.0
1005-3	27	0	0.0
1005-5	123	1529	47.8
Total	302	3138	98.1

A reblend of 1005-3, reference oil1005-5, is available at the TMC, and has been introduced into HTCBT testing.

A reblend of 44-3, reference oil 44-4, is available at the TMC, and is in the process of being introduced into HTCBT testing.

TMC inventories of Reference Oils 44-3 and 1005-3 have been depleted.