



Test Monitoring Center

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

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

MEMORANDUM: 13-064
DATE: November 21, 2013
TO: Gil Reinhard, Chairman, CBT Surveillance Panel
FROM: Michael T. Kasimirsky *Michael T. Kasimirsky*
SUBJECT: HTCBT Testing from April 1, 2013 through September 30, 2013

A total of 296 HTCBT tests were reported to the Test Monitoring Center during the report period from April 1, 2013 through September 30, 2013.

Please find attached a summary of testing activity this period.

MTK/mtk/astm1013.doc/mem13-064.mtk.doc

cc: F. M. Farber

J. A. Clark

CBT Surveillance Panel

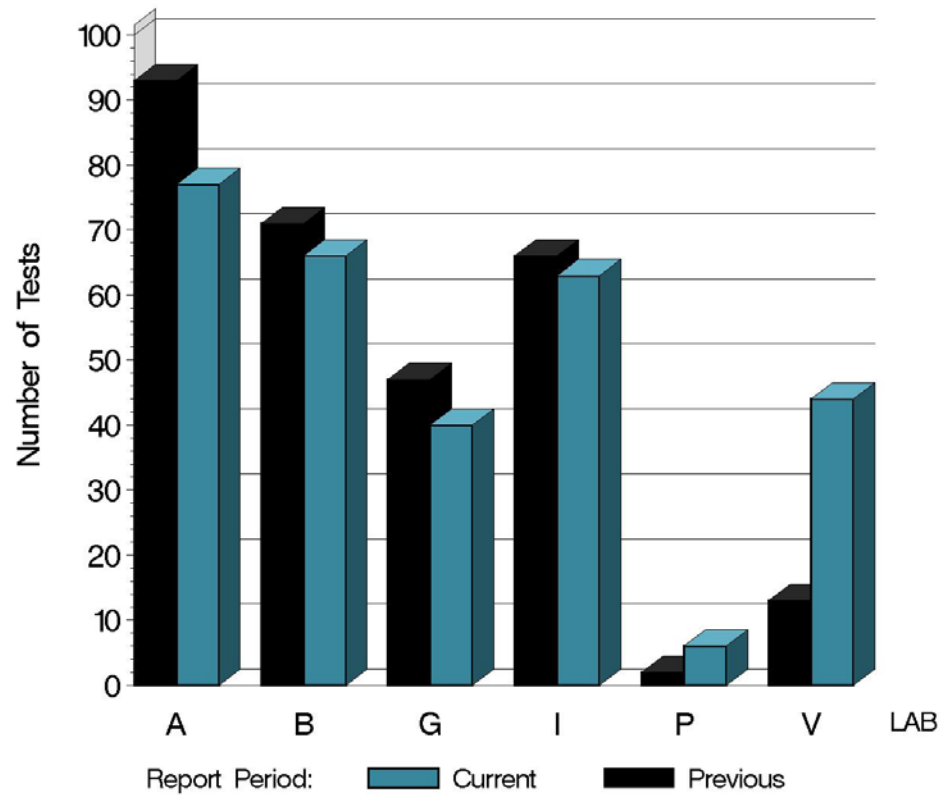
<ftp://ftp.astmtmc.cmu.edu/docs/bench/htcibt/semiannualreports/htcibt-10-2013.pdf>

Distribution: email

HTCBT (D 6594)

Reporting Data	
Number of Labs	6

NUMBER OF TESTS REPORTED
BY LAB AND REPORT PERIOD



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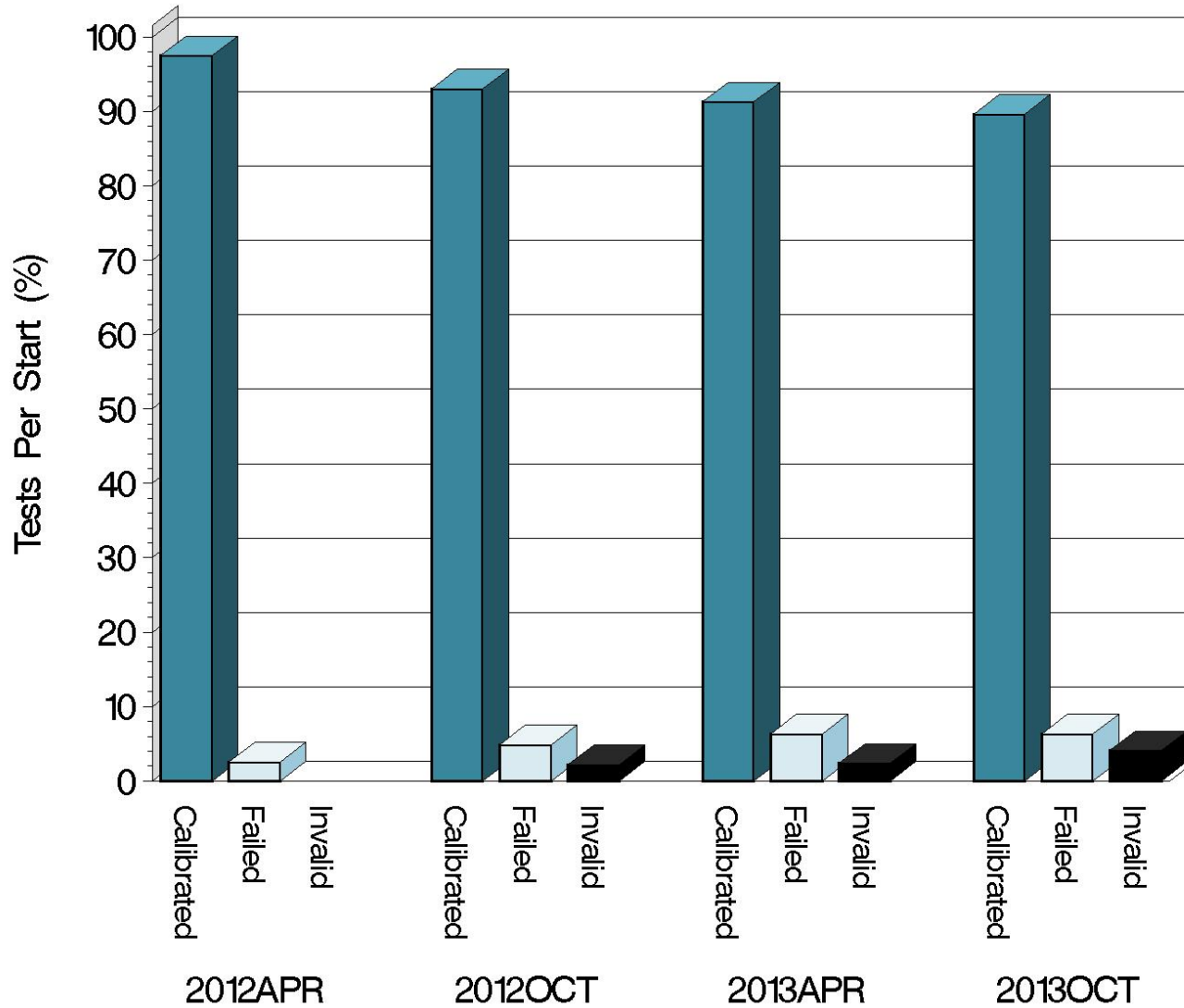
HTCBT (D 6594)

Test Distribution by Validity

		Number of Tests
Accepted for calibration	AC	241
Rejected	OC	17
Invalidated	LC	8
Aborted	XC	3
Acceptable Shakedown Run	AG	5
Unacceptable Shakedown Run	OG	9
Aborted Shakedown Run	XG	9
Hardware Approval run	NI	4
Unacceptable Approval run	MI	0
Total		296

HTCBT (D 6594)

CALIBRATION ATTEMPT SUMMARY



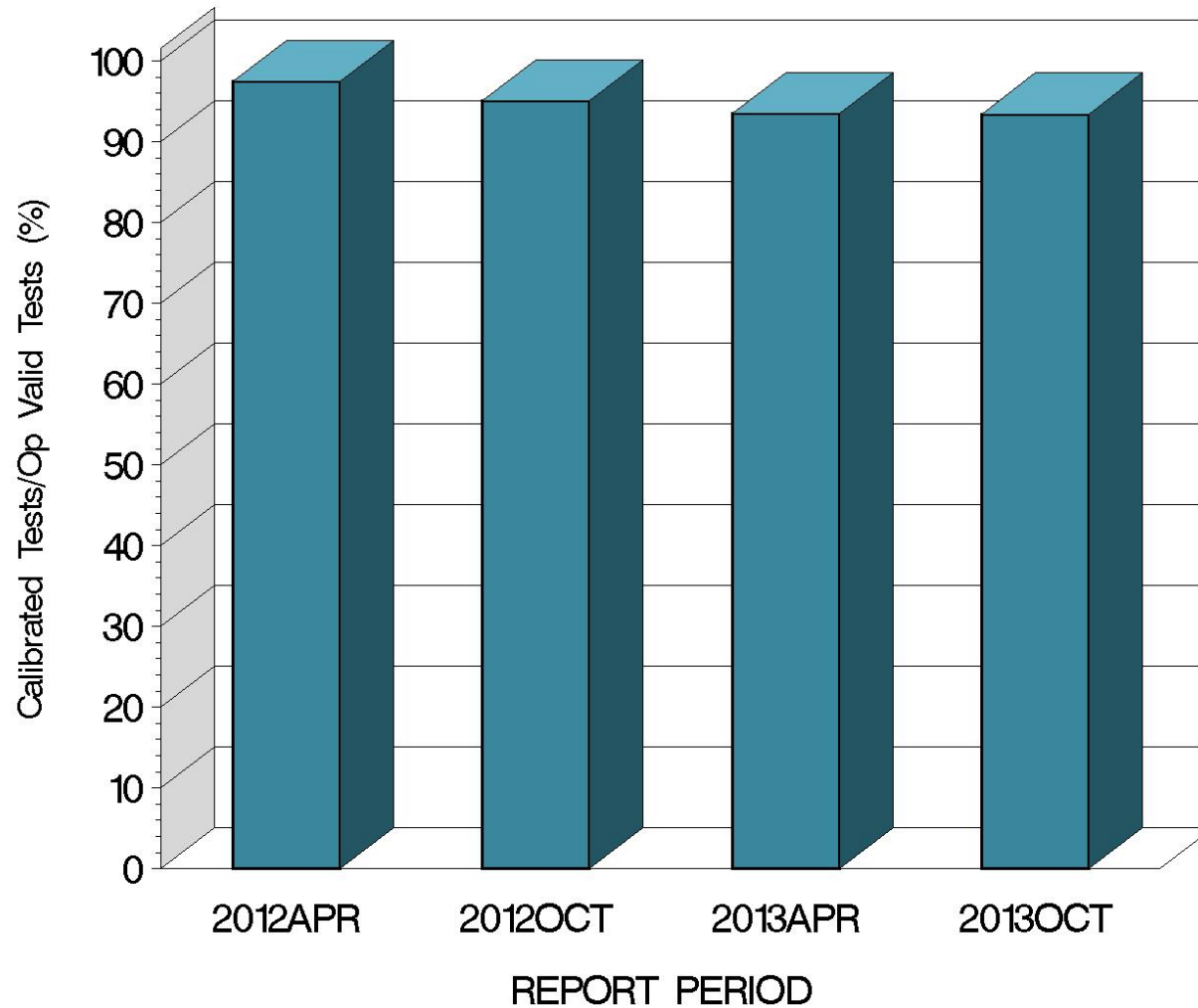
Resolution

Report Period

14:40:12 21NOV2013

HTCBT (D 6594)

OPERATIONALLY VALID TESTS
MEETING ACCEPTANCE CRITERIA



14:40:12 21NOV2013

HTCBT (D 6594)

CAUSES FOR LOST TESTS

Summary of Reasons for Failed Tests	No. of Tests
Copper, severe	4
Copper, mild	8
Lead, severe	1
Lead, mild	0
Copper & Lead, severe	4

HTCBT (D 6594)

CAUSES FOR LOST TESTS (CONTINUED)

Summary of Reasons for Invalid Tests	No. of Tests
End of Test Problem	1
Equipment Failure	2
Bath Problem	1
Heater Failure	2
Unapproved Test Coupons Used	2

HTCBT (D 6594)

CAUSES FOR LOST TESTS (CONTINUED)

Summary of Reasons for Aborted Tests	No. of Tests
Sample Spilled	1
Power Failure	1
Heater Failure	1
Sample Vessel Broken	1
Water Leak	8

HTCBT (D 6594)

Average Δ/s By Laboratory			
Lab	n	CUC	PBC
A	77	0.732	-0.212
B	60	0.377	-0.504
G	37	0.983	0.574
I	60	0.108	0.117
P	5	1.813	0.308
V	19	-3.048	0.202
Industry	258	0.283	-0.050

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

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

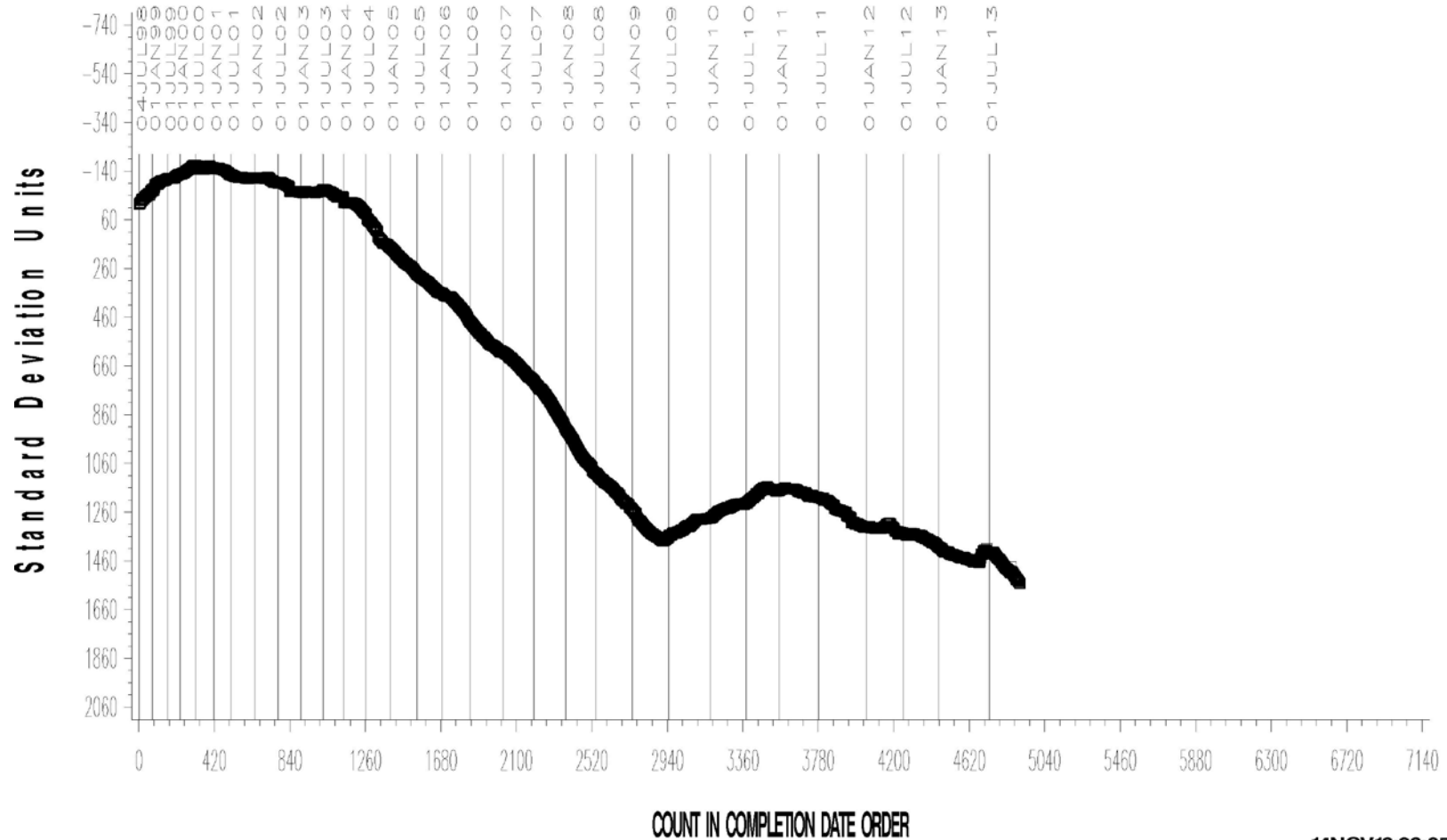
HTCBT (D 6594)

HIGH TEMP CBT INDUSTRY OPERATIONALLY VALID DATA



COPPER CHANGE (ppm)

CUSUM Severity Analysis



14NOV13:23:05

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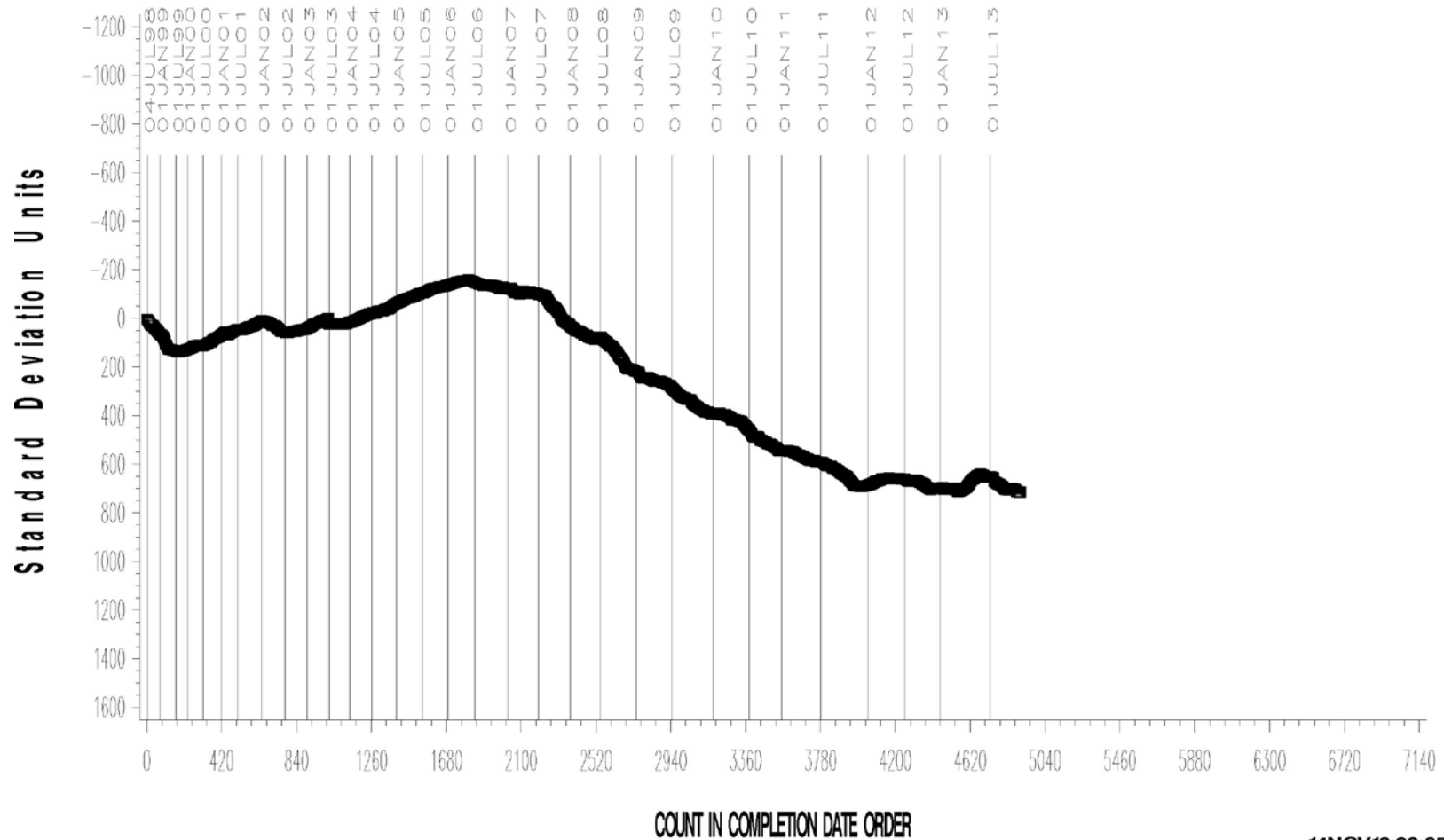
HTCBT (D 6594)

HIGH TEMP CBT INDUSTRY OPERATIONALLY VALID DATA



LEAD CHANGE (ppm)

CUSUM Severity Analysis



14NOV13:23:05

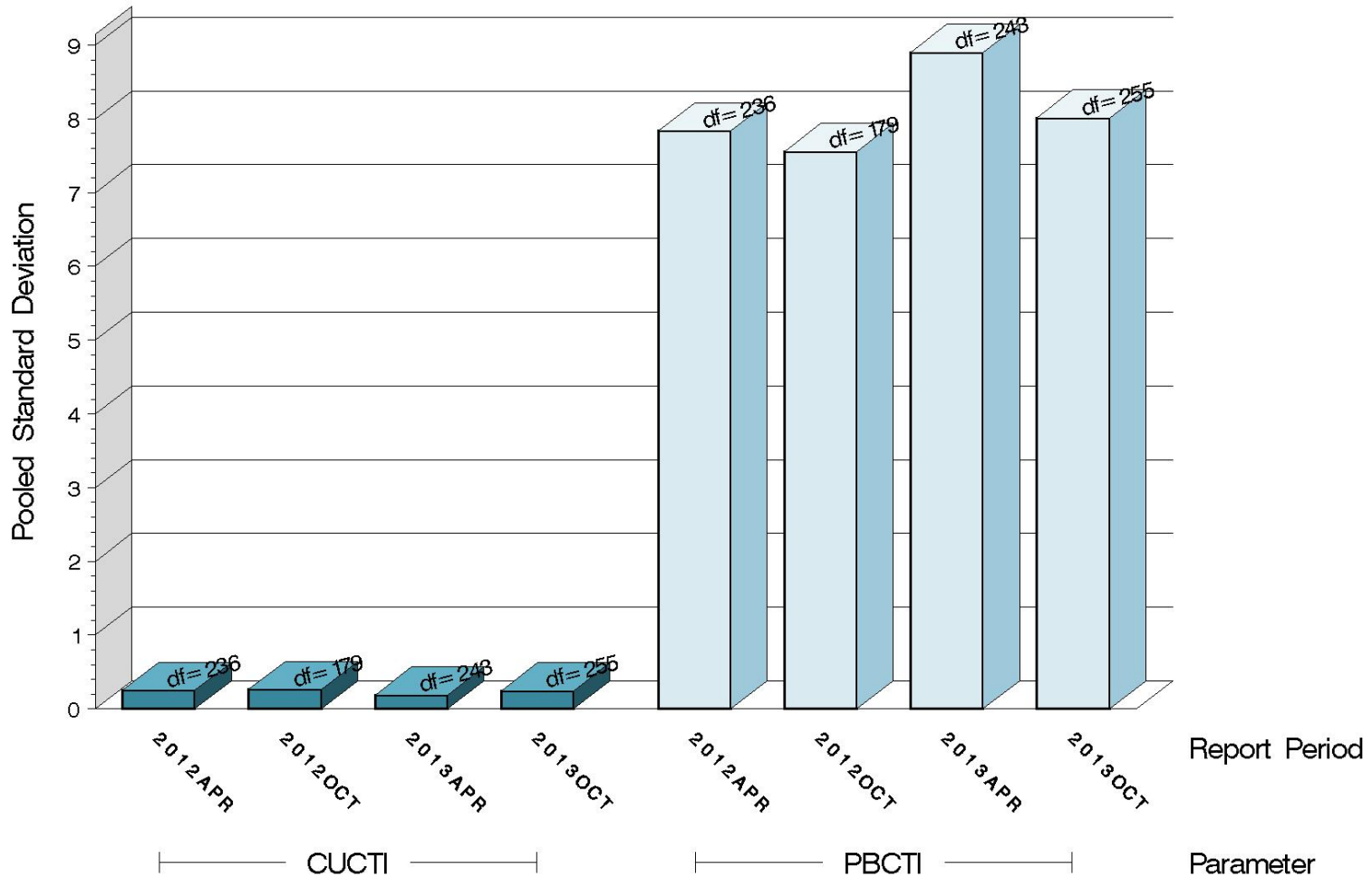
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HTCBT (D 6594)

TEST PRECISION

POOLED STANDARD DEVIATION
BY SIX-MONTH ASTM REPORT PERIOD



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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 slightly severe.

Over the course of this report period, lead severity, as measured by cusum plotting, was on target.

Precision

Pooled s for this period is 0.25 for copper and 8.01 for lead.

Over the course of this report period, Precision, as measured by pooled standard deviation, is slightly worse than previous periods for copper and is slightly better than the previous period for lead, but is still within historical levels.

HTCBT (D 6594)

INFORMATION LETTERS

HTCBT Information Letter 13-1, Sequence No. 10, dated August 14, 2013.

- New Glassware Cleaning Solution

HTCBT (D 6594)

STATUS OF REFERENCE OIL SUPPLY

Reference Oil	Samples @ Labs	@ TMC	
		Samples (4 oz)	Gallons
44-1	0	0	0.0
44-2	2	0	0.0
44-3	40	688	21.5
1005-1	0	0	0.0
1005-3	61	726	22.7
Total	103	1414	44.2