



# Test Monitoring Center

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

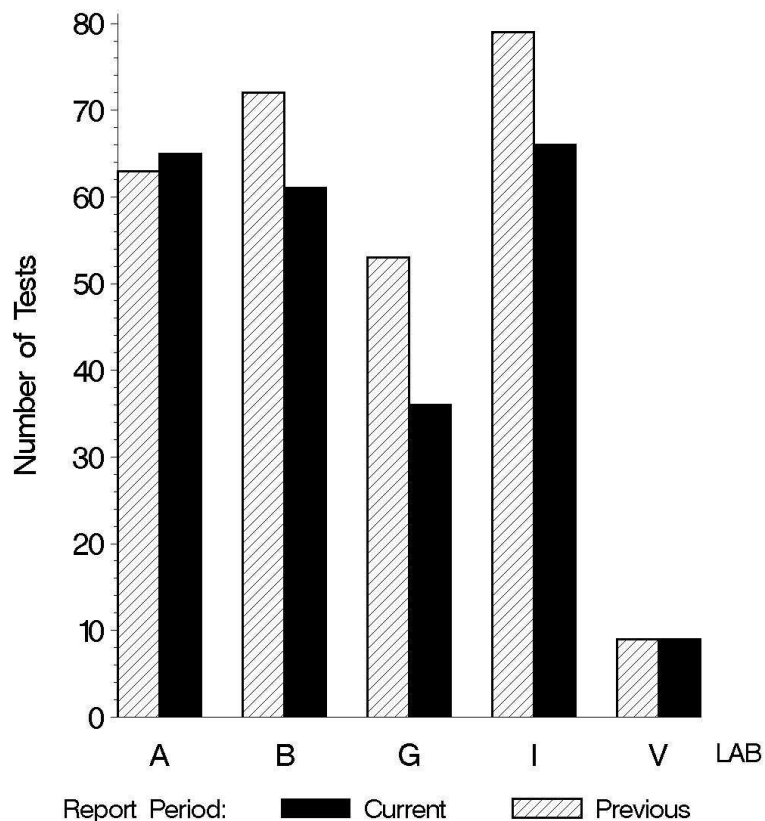
MEMORANDUM: 12-017  
DATE: May 22, 2012  
TO: Gil Reinhard, Chairman, CBT Surveillance Panel  
FROM: Michael T. Kasimirsky *Michael T. Kasimirsky*  
SUBJECT: HTCBT Testing from October 1, 2011 through March 31, 2012

A total of 237 HTCBT tests were reported to the Test Monitoring Center during the period from October 1, 2011 through March 31, 2012. Following is a summary of testing activity this period.

	Reporting Data
Number of Labs	5

Tests reported this period were distributed as shown below:

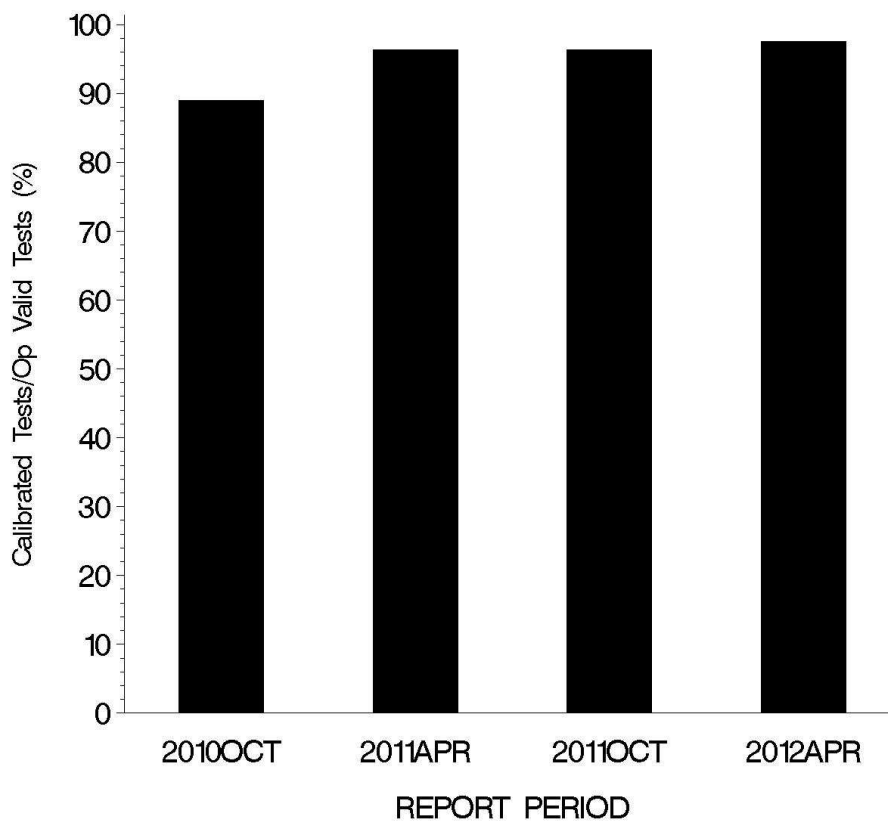
## NUMBER OF TESTS REPORTED BY LAB AND REPORT PERIOD



**Test Distribution by Validity**

	TMC Validity Codes	No. of Tests
Operationally and Statistically Acceptable	AC	231
Failed Acceptance Criteria	OC	6
Operationally Invalid	LC, RC	0
Aborted	XC	0
Acceptable Donated Tests	AG	0
Unacceptable Donated Tests	OG	0
Total		237

**OPERATIONALLY VALID TESTS  
MEETING ACCEPTANCE CRITERIA**



The above chart shows the percentage of accepted operationally valid tests. Six tests failed to meet the acceptance criteria this period.

The reasons for failed, invalid, or aborted tests are shown in the following tables:

**Summary of Reasons for Failed Tests**

	No. of Tests
Copper, mild	2
Lead, mild	1
Copper & Lead, severe	3

**Summary of Reasons for Invalid Tests**

	No. of Tests
No Invalid Tests	0

**Summary of Reasons for Aborted Tests**

	No. of Tests
No Aborted Tests	0

**Industry Severity Summary**

The following table shows the average  $\Delta/s$ , by laboratory and for the industry overall, for both copper and lead concentration for this ASTM report period.

Average  $\Delta/s$  by Lab

Lab	n	CUC	PBC
A	65	0.735	-0.132
B	61	-0.264	-0.286
G	36	0.689	-0.040
I	66	-0.479	0.525
V	9	2.511	-0.075
Industry	237	0.200	0.027

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

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

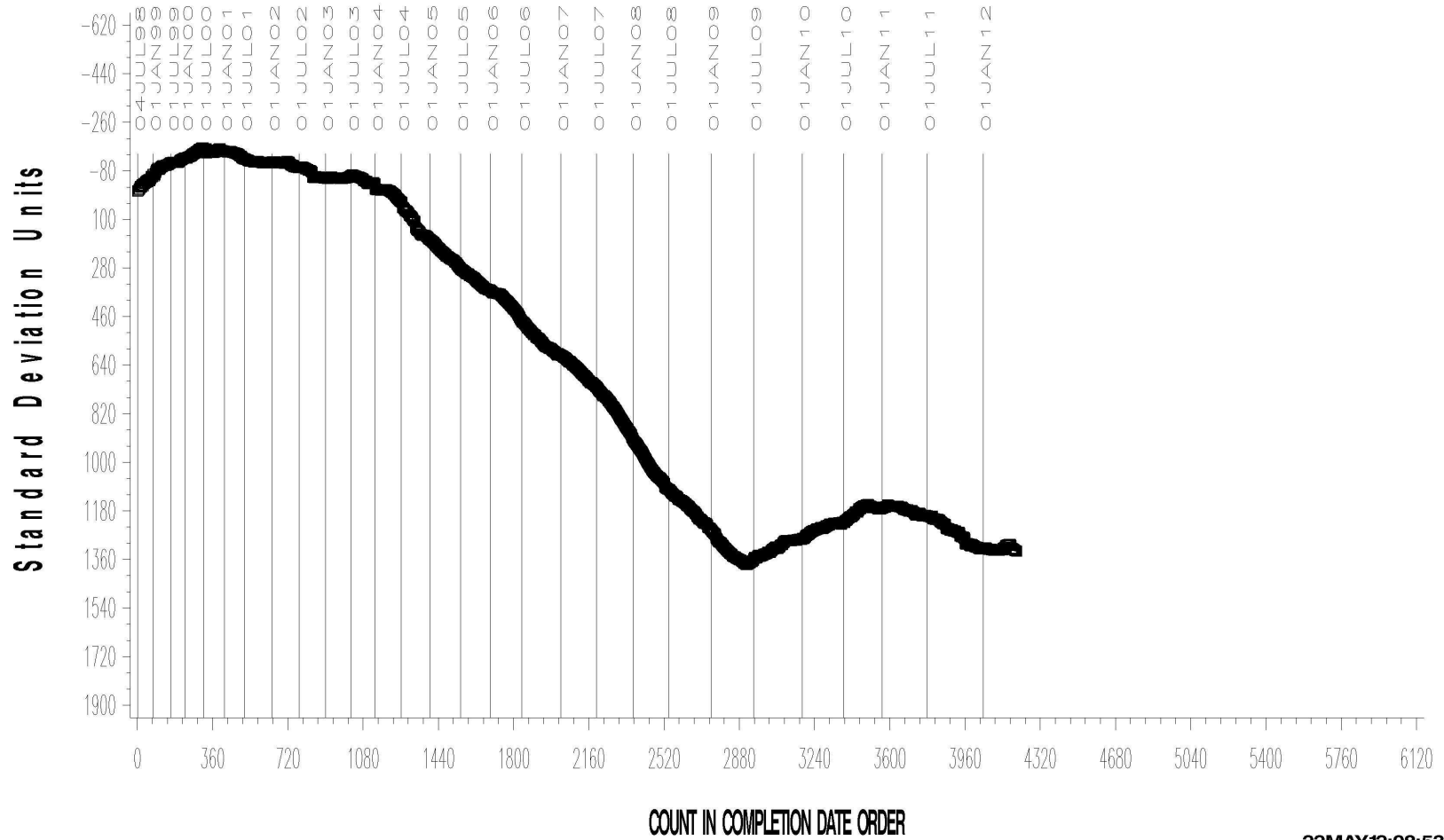
The plots of summation delta/s from target for change in copper and change in lead, respectively, are shown on the following pages. Copper concentration results are very slightly severe and lead concentration results are on target for the period.

### HIGH TEMP CBT INDUSTRY OPERATIONALLY VALID DATA



### COPPER CHANGE (ppm)

CUSUM Severity Analysis

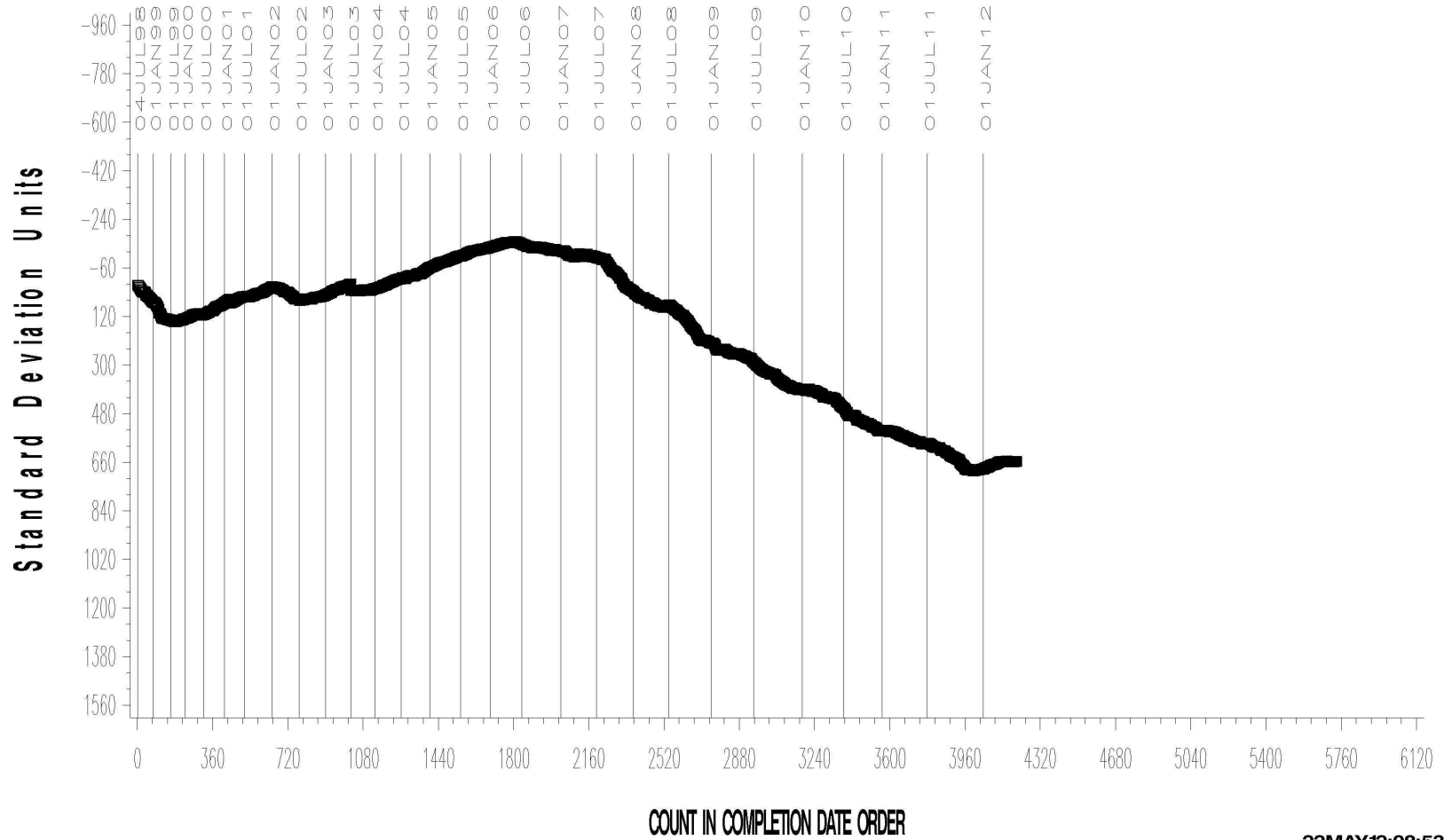


### HIGH TEMP CBT INDUSTRY OPERATIONALLY VALID DATA



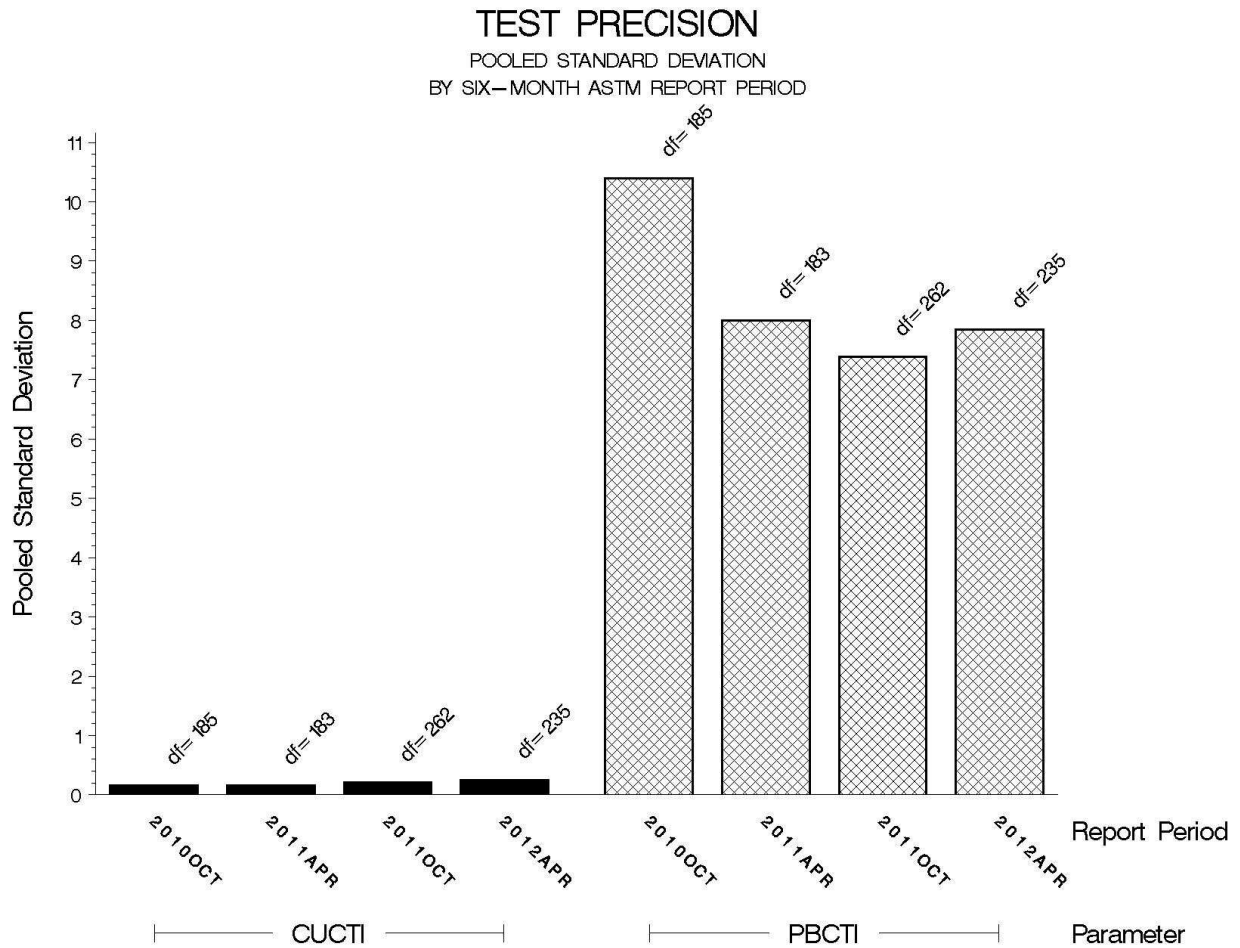
### LEAD CHANGE (ppm)

CUSUM Severity Analysis



POOLED S:

Precision estimates, by report period are depicted below. Precision estimates for both copper and lead are within historical levels.



STATUS OF REFERENCE OIL SUPPLY:

At the end of this report period, the testing oil supply stood as outlined in the following table:

Oil	Samples @ Labs	@ TMC	
		Samples	Gallons
44-1	0	0	0.0
44-2	52	25	0.8
44-3	0	960	30.0
1005-1	0	0	0.0
1005-3	47	1200	37.5
<b>Total</b>	<b>99</b>	<b>2185</b>	<b>68.3</b>

The TMC supply of reference oil 44-2 is nearly depleted. The TMC has procured a reblend of this oil, but it has not been introduced into the reference oil system at this time. A quantity of reference oil 1005-3 has been set aside for HTCBT use exclusively; the quantity remaining of that reserved amount is shown in the table. No further reblends of oil 1005-3 will be available in the future.

INFORMATION LETTERS:

No information letters were issued this period.

SUMMARY

- Over the course of this report period, copper severity, as measured by cusum plotting, was very slightly severe.
- Over the course of this report period, lead severity, as measured by cusum plotting, was on target.

Precision, as measured by pooled standard deviation, is slightly worse than last period for both copper and lead concentration, but is still comparable to historical levels.

MTK/mtk/astm0412.doc/mem12-017.mtk.doc

c: F. M. Farber

J. A. Clark

CBT Surveillance Panel

<ftp://ftp.astmtmc.cmu.edu/docs/bench/htcibt/semiannualreports/htcibt-04-2012.pdf>

Distribution: email