



# Test Monitoring Center

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

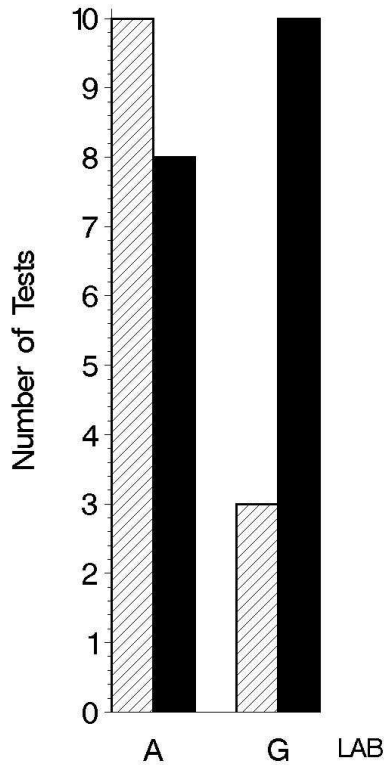
MEMORANDUM: 11-013  
DATE: May 25, 2011  
TO: Gil Reinhard, Chairman, CBT Surveillance Panel  
FROM: Michael T. Kasimirsky *Michael T. Kasimirsky*  
SUBJECT: CBT Testing from October 1, 2010 through March 31, 2011

A total of 18 CBT tests were reported to the Test Monitoring Center during the period from October 1, 2010 through March 31, 2011. Following is a summary of testing activity this period.

	Reporting Data
Number of Labs	2

Tests reported this period were distributed as shown below:

## NUMBER OF TESTS REPORTED BY LAB AND REPORT PERIOD

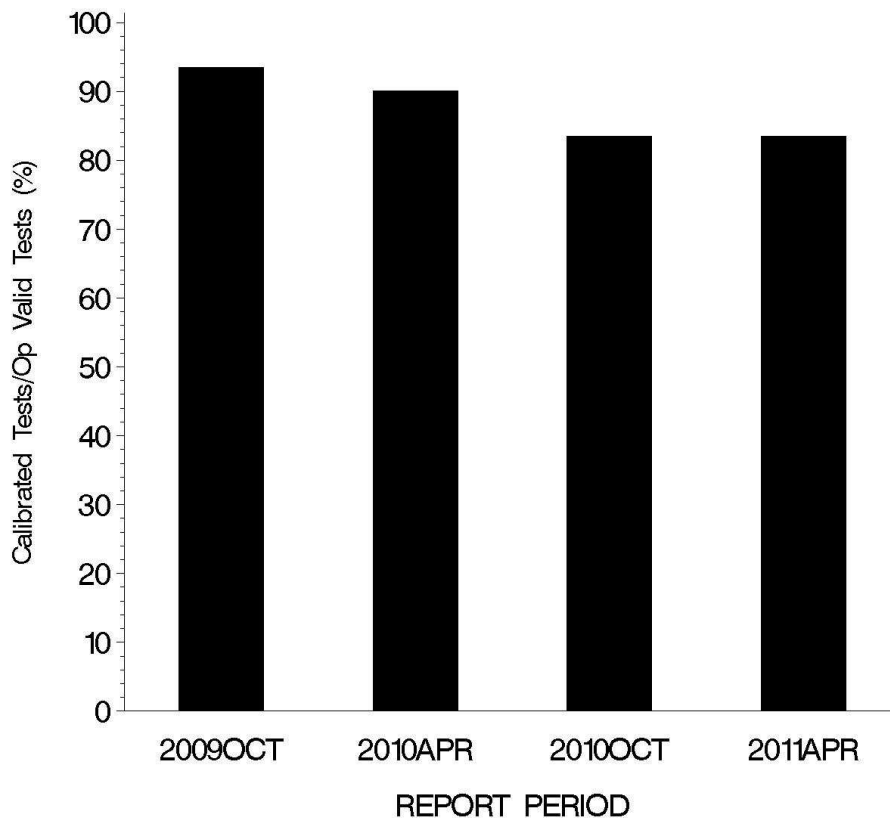


Report Period:  Current  Previous

**Test Distribution by Validity**

	TMC Validity Codes	No. of Tests
Operationally and Statistically Acceptable	AC	10
Failed Acceptance Criteria	OC	2
Operationally Invalid	LC, RC	0
Aborted	XC	0
Acceptable Donated Tests	AG	0
Invalid Donated Tests	LG	6
Total		18

**OPERATIONALLY VALID TESTS  
MEETING ACCEPTANCE CRITERIA**



The above chart shows the percentage of accepted operationally valid tests. Two tests failed to meet the acceptance criteria this period. One was mild on lead concentration and the other mild on both copper and lead concentration.

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

**Summary of Reasons for Failed Tests**

	No. of Tests
Lead, mild	1
Copper & Lead, mild	1

**Summary of Reasons for Invalid Tests**

	No. of Tests
Donated tests on new test coupons. Corresponding reference oil test failed, making the results of the donated tests not interpretable	6

**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	8	-1.341	-0.998
G	4	-1.176	-0.853
Industry	12	-1.286	-0.949

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

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

The plots of summation delta/s from target for change in copper and change in lead, respectively, are shown on the following pages. Both copper and lead concentration results are continuing to trend mild.

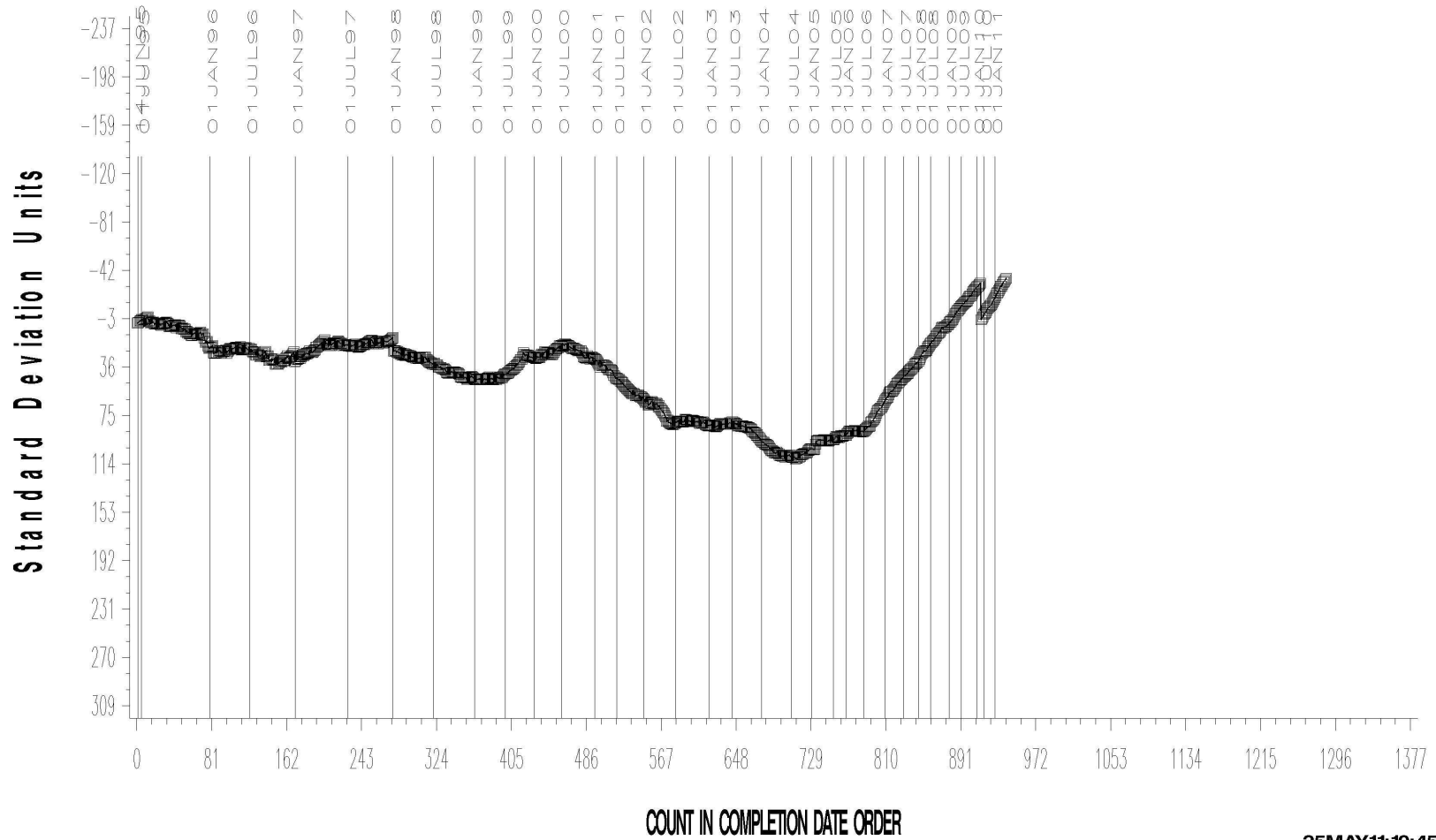
The test has been trending mild on both copper and lead concentration since 2006 at approximately 0.8 and 0.6 standard deviations, respectively, which is considered a significant shift. Both laboratories are significantly mild of target for this period. The TMC recommends that an industry correction factor be discussed and that a more robust referencing system be considered to address overly off target laboratories.

### CBT INDUSTRY OPERATIONALLY VALID DATA



### COPPER CHANGE (ppm)

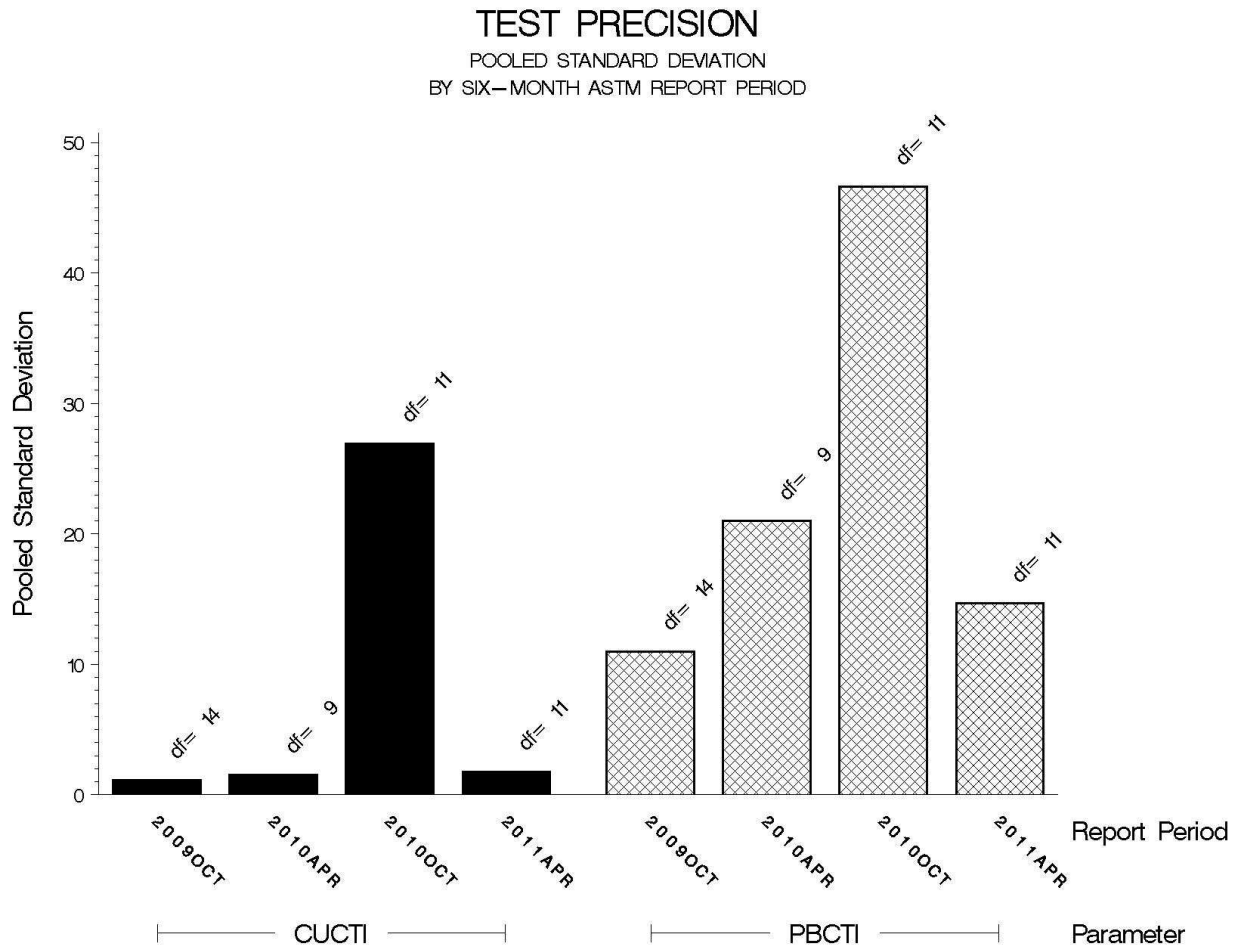
CUSUM Severity Analysis





POOLED S:

Precision estimates, by report period are depicted below. Precision estimates for both copper and lead have improved.



STATUS OF REFERENCE OIL SUPPLY:

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

		@ TMC	
Oil	Samples @ Labs	Samples	Gallons
43	12	1529	47.8

INFORMATION LETTERS:

No information letters were issued this period.

SUMMARY

- Over the course of this report period, both copper and lead severity as measured by cusum plotting continued the existing mild trend.
- Precision as measured by pooled standard deviation is better than previous periods for both copper and lead concentration.

MTK/mtk/astm0411.doc/mem11-013.mtk.doc

c: F. M. Farber

J. A. Clark

CBT Surveillance Panel

<ftp://ftp.astmtmc.cmu.edu/docs/bench/cbt/semiannualreports/cbt-04-2011.pdf>

Distribution: email