

#### **Test Monitoring Center**

@ Carnegie Mellon University 6555 Penn Avenue, Pittsburgh, PA 15206, USA http://astmtmc.cmu.edu 412-365-1000

MEMORANDUM: 14-011

DATE: May 20, 2014

TO: Gil Reinhard, Chairman, CBT Surveillance Panel

FROM: Michael T. Kasimirsky Michael J. Rasimisky

SUBJECT: HTCBT Testing from October 1, 2013 through March 31, 2014

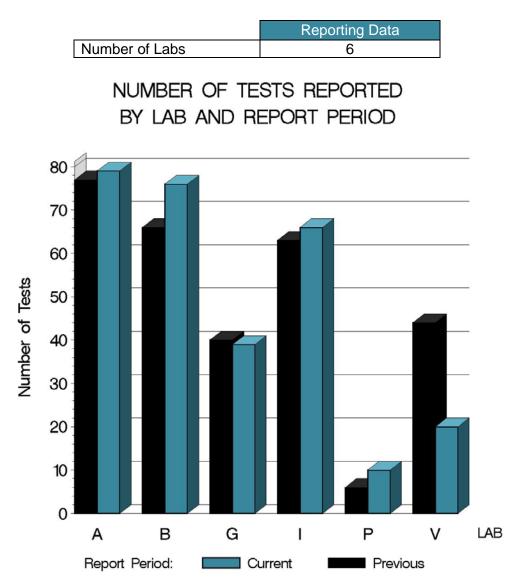
A total of 290 HTCBT tests were reported to the Test Monitoring Center during the report period from October 1, 2013 through March 31, 2014.

Please find attached a summary of testing activity this period.

MTK/mtk/astm0414.doc/mem14-011.mtk.doc

cc: F. M. Farber J. A. Clark CBT Surveillance Panel <u>ftp://ftp.astmtmc.cmu.edu/docs/bench/htcbt/semiannualreports/htcbt-04-2014.pdf</u>

Distribution: email



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#### **Test Distribution by Validity**

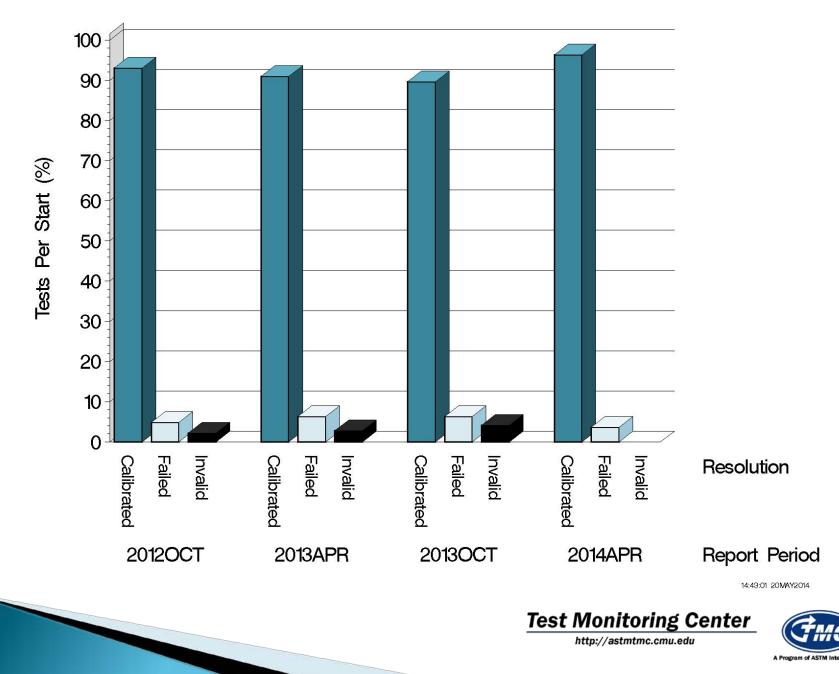
		Number of Tests
Accepted for calibration	AC	237
Rejected	OC	9
Invalidated	LC	0
Aborted	XC	0
Acceptable Shakedown Run	AG	4
Unacceptable Shakedown Run	OG	16
Aborted Shakedown Run	XG	0
Hardware Approval Run	NI	23
Unacceptable Hardware Run	MI	1
Total		290



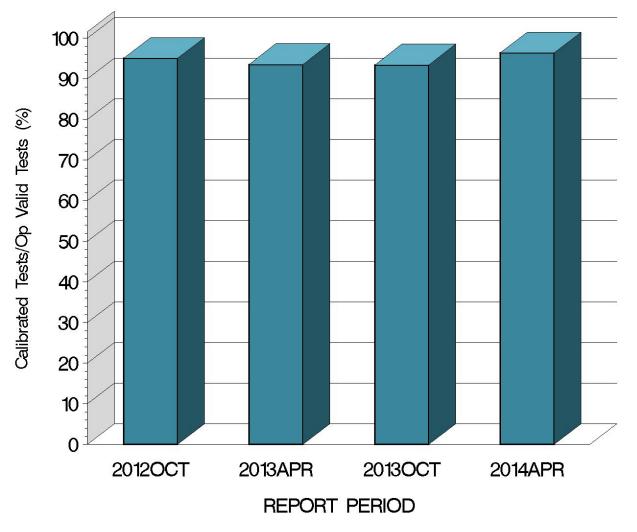
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**Test Monitoring Center** 

#### CALIBRATION ATTEMPT SUMMARY







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#### **CAUSES FOR LOST TESTS**

Summary of Reasons for Failed Tests	No. of Tests
Copper, severe	1
Copper, mild	0
Lead, severe	1
Lead, mild	0
Copper & Lead, severe	5
Copper Severe, Lead Mild	2





#### **CAUSES FOR LOST TESTS (CONTINUED)**

Summary of Reasons for Invalid Tests	No. of Tests
No tests were invalid this period.	0





#### **CAUSES FOR LOST TESTS (CONTINUED)**

Summary of Reasons for Aborted Tests	No. of Tests
No tests were aborted this period.	0





Average ∆/s By Laboratory				
Lab	n	CUC	PBC	
A	73	0.773	-0.533	
В	70	0.811	-0.701	
G	33	0.685	0.325	
Ι	60	0.450	-0.023	
Р	10	5.022	-0.680	
V	0	-	-	
Industry	246	0.866	-0.347	

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

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

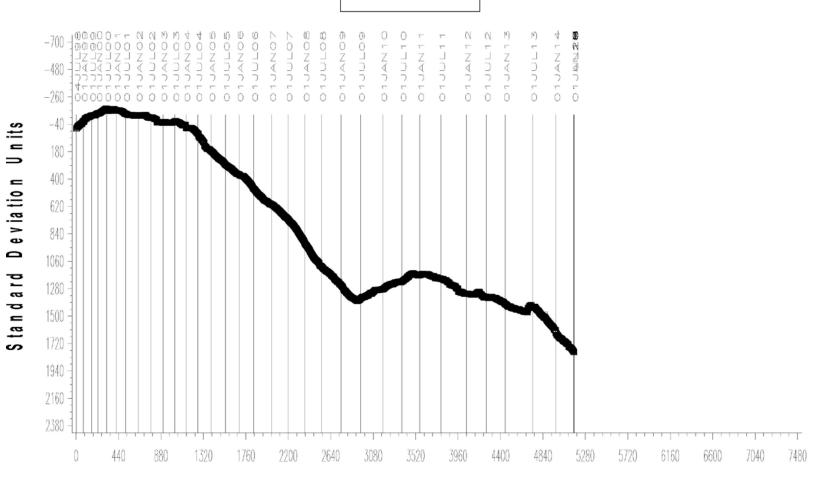


#### HIGH TEMP CBT INDUSTRY OPERATIONALLY VALID DATA



**COPPER CHANGE (ppm)** 

CUSUM Severity Analysis



COUNT IN COMPLETION DATE ORDER

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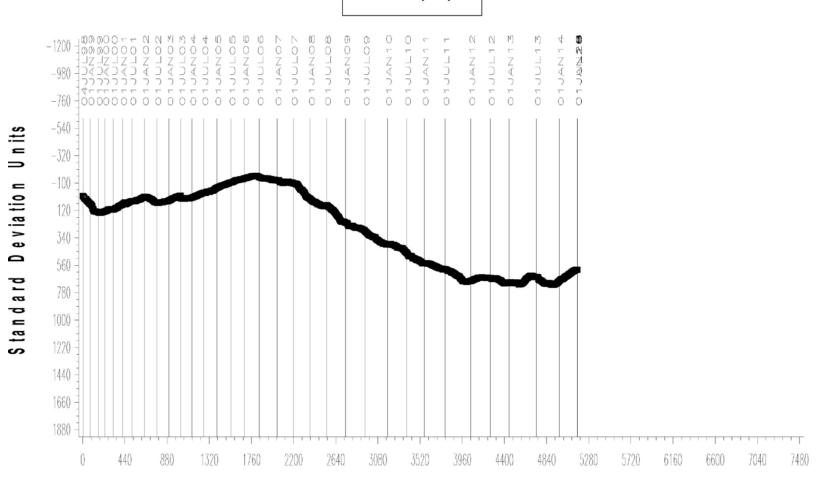
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#### HIGH TEMP CBT INDUSTRY OPERATIONALLY VALID DATA



LEAD CHANGE (ppm)

CUSUM Severity Analysis



COUNT IN COMPLETION DATE ORDER

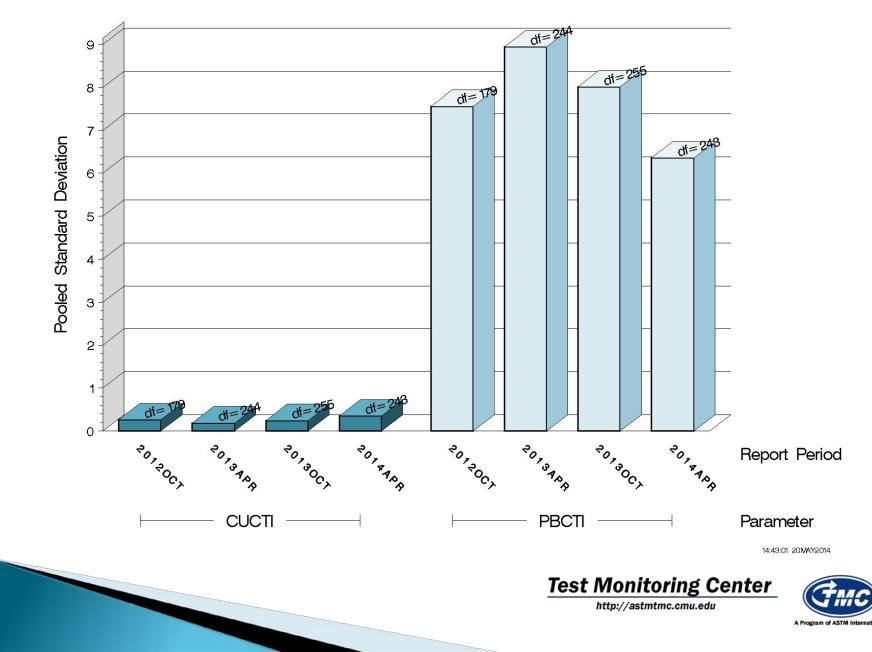
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Test Monitoring Center http://astmtmc.cmu.edu

TEST PRECISION

POOLED STANDARD DEVIATION BY SIX-MONTH ASTM REPORT PERIOD



# 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 slightly mild.

#### Precision

Pooled s for this period is 0.36 for copper and 6.35 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 better than the previous period for lead, but is still within historical levels.



#### **INFORMATION LETTERS**

No HTCBT Information Letters were issued this period.





#### STATUS OF REFERENCE OIL SUPPLY

		@ TMC	
Reference	Samples @	Samples	Gallons
Oil	Labs	(4 oz)	
44-1	0	0	0.0
44-2	0	0	0.0
44-3	127	560	17.5
1005-1	0	0	0.0
1005-3	86	505	15.8
Total	213	1065	33.3



