

### **Test Monitoring Center**

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

MEMORANDUM: 15-013

DATE: May 6, 2015

TO: Gil Reinhard, Chairman, CBT Surveillance Panel

FROM: Michael T. Kasimirsky Michael J. Rasimirsky

SUBJECT: CBT Testing from October 1, 2014 through March 31, 2015

A total of 18 CBT tests were reported to the Test Monitoring Center during the report period from October 1, 2014 through March 31, 2015.

Please find attached a summary of testing activity this period.

MTK/mtk/astm0415.doc/mem15-013.mtk.doc

cc: F. M. Farber J. A. Clark

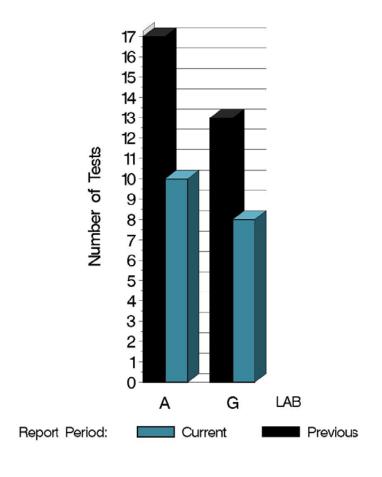
**CBT Surveillance Panel** 

ftp://ftp.astmtmc.cmu.edu/docs/bench/cbt/semiannualreports/cbt-04-2015.pdf

Distribution: email

| Reporting Data |   |
|----------------|---|
| Number of Labs | 2 |

### NUMBER OF TESTS REPORTED BY LAB AND REPORT PERIOD



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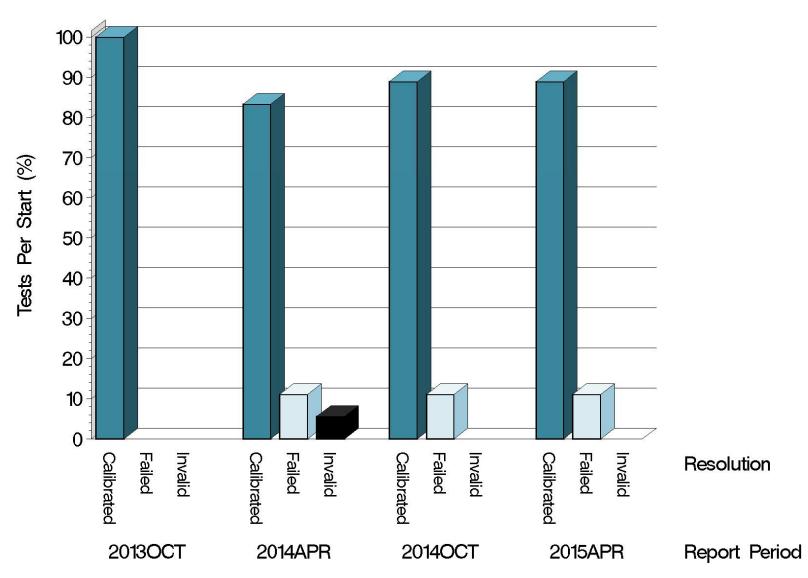


### **Test Distribution by Validity**

|                           |    | Number of Tests |
|---------------------------|----|-----------------|
| Accepted for Calibration  | AC | 16              |
| Rejected                  | OC | 2               |
| Invalidated               | LC | 0               |
| Aborted                   | XC | 0               |
| Hardware Approval run     | NI | 0               |
| Unacceptable Approval run | MI | 0               |
| Invalid Approval run      | LI | 0               |
| Total                     |    | 18              |



### CALIBRATION ATTEMPT SUMMARY

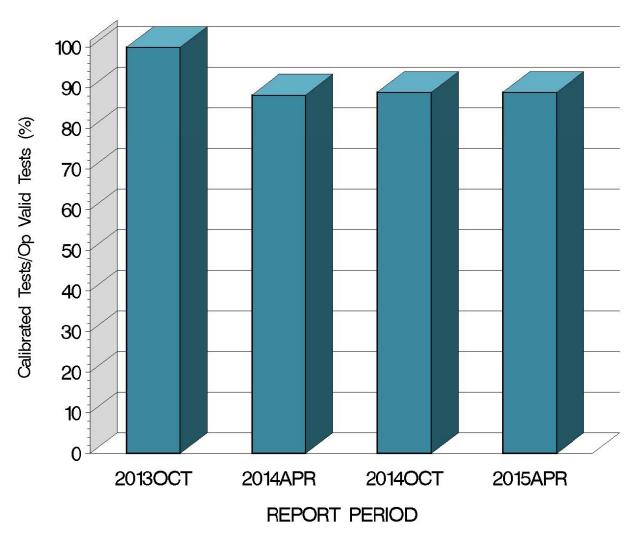


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# OPERATIONALLY VALID TESTS MEETING ACCEPTANCE CRITERIA



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### **CAUSES FOR LOST TESTS**

| <b>Summary of Reasons for Failed Tests</b> | No. of Tests |
|--|--------------|
| Mild Lead & Copper Concentration           | 2            |

| <b>Summary of Reasons for Invalid Tests</b> | No. of Tests |
|---|--------------|
| No tests were invalid this period           | 0            |

| <b>Summary of Reasons for Aborted Tests</b> | No. of Tests |
|---|--------------|
| No tests were aborted this period           | 0            |



| Average Δ/s By Laboratory |    |        |          |
|---------------------------|----|--------|----------|
| Lab                       | n  | CUC    | PBC      |
| Α                         | 10 | -1.755 | -1.98667 |
| G                         | 8  | -1.171 | -0.80083 |
| Industry                  | 18 | -1.496 | -1.45963 |

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

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

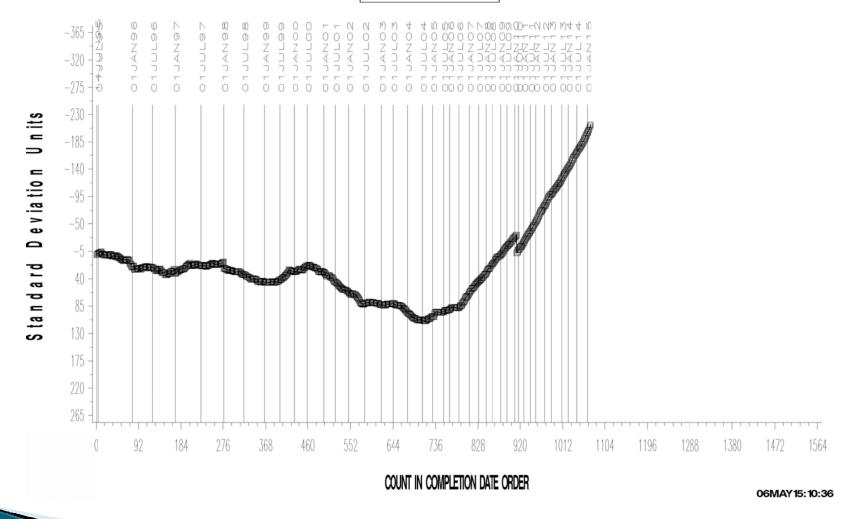


#### CBT INDUSTRY OPERATIONALLY VALID DATA



#### COPPER CHANGE (ppm)

**CUSUM Severity Analysis** 



Test Monitoring Center

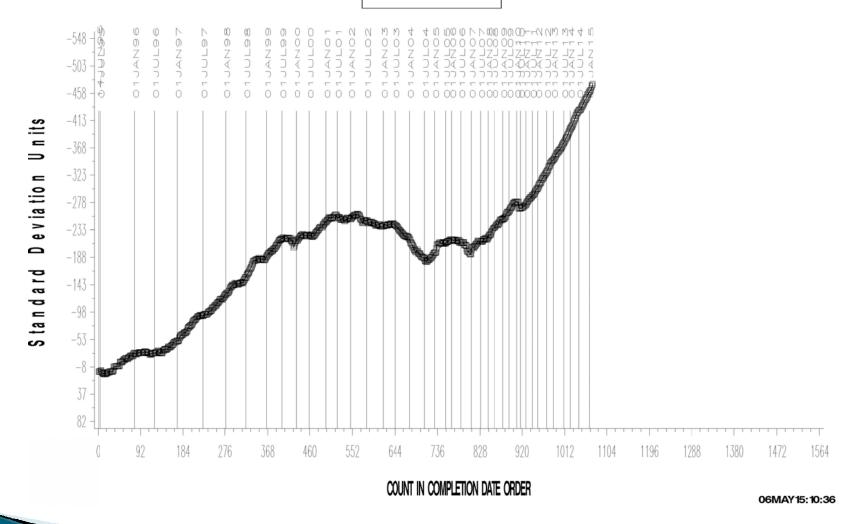


#### CBT INDUSTRY OPERATIONALLY VALID DATA



LEAD CHANGE (ppm)

**CUSUM Severity Analysis** 

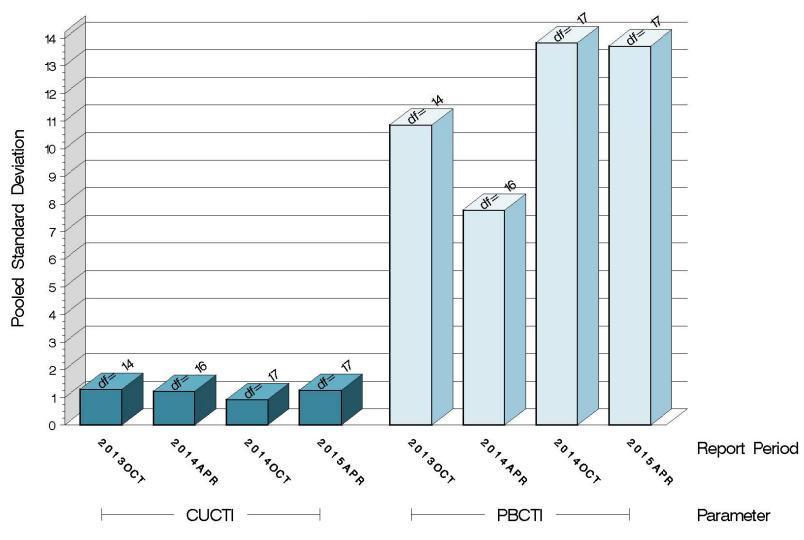






### TEST PRECISION

POOLED STANDARD DEVIATION
BY SIX-MONTH ASTM REPORT PERIOD



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# CBT (D 5968) SUMMARY OF SEVERITY & PRECISION

### Severity

Over the course of this report period, both copper and lead severity, as measured by CUSUM plotting, continued the existing mild trend.

### **Precision**

Pooled s for this period is 1.26 for copper and 13.72 for lead.

Precision, as measured by pooled standard deviation, is slightly worse than previous periods for copper and is slightly worse than previous periods for lead, but is still within historical levels.





### **INFORMATION LETTERS**

No CBT Information Letters were issued this period.



### STATUS OF REFERENCE OIL SUPPLY

|     |           | @ TMC   |         |
|-----|-----------|---------|---------|
| Oil | Samples @ | Samples | Gallons |
|     | Labs      | (4 oz)  |         |
| 43  | 37        | 1312    | 41.0    |

