MEMORANDUM: 04-075

DATE: October 1, 2004

TO: Joe Franklin, Chairman, CBT Surveillance Panel

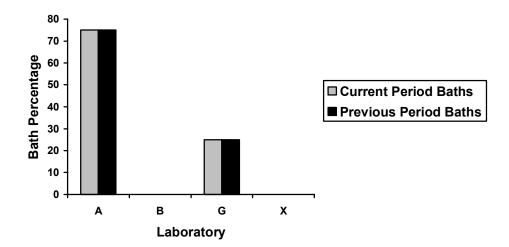
FROM: Jeff Clark

SUBJECT: Corrosion Bench Test Status for the October 2004 ASTM Report Period

A total of 29 Corrosion Bench Test results from four baths in two labs were reported to the TMC during the October 2004 ASTM report period, which began on April 1, 2004 and ended on September 30, 2004.

The following chart shows the distribution by laboratory.

## **Laboratory/Bath Distribution**



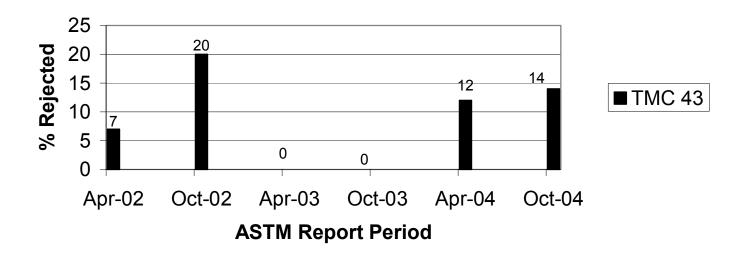
The following summarizes the status of the reference oil tests reported to the TMC:

	TMC Validity Codes	No. of Tests
Operationally and Statistically Acceptable	AC	25
Failed Acceptance Criteria	OC	4
Declared Invalid by Laboratory	LC	0
Aborted	XC	0
Total		29

Three of the tests that failed the acceptance criteria were due to severe lead results; one test that failed the acceptance criteria was due to mild lead results.

The following presents the fail rate for this period with the fail rates of previous periods.

# Comparison of Rejection Rates for This Period Versus Previous Periods



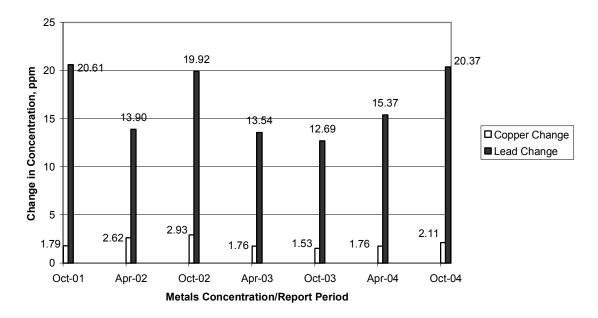
## **Industry Severity and Precision**

The current severity for the change in metals concentration parameters on all operationally valid tests, for the current and previous periods, is tabulated below.

Period	n	Δ Cu	ΔPb
		Mean $\Delta$ /s	Mean Δ/s
4/1/04 through 9/30/04	29	0.04	0.38
10/1/03 through 3/31/04	33	0.64	1.03
4/1/03 through 9/30/03	27	0.08	0.43
10/1/02 through 3/31/03	29	0.11	-0.04
4/1/02 through 9/30/02	41	0.32	0.38

Figures 1 and 2 plot the Summation delta/s from target for both change in copper and change in lead, respectively. Figure 1 shows copper change to be on target for the period. Figure 2 shows lead change to be severe for the period. Precision estimates, by report period are depicted below. Precision for both Cu and Pb change show degradation compared to recent periods, but both are within historical levels (see chart below).

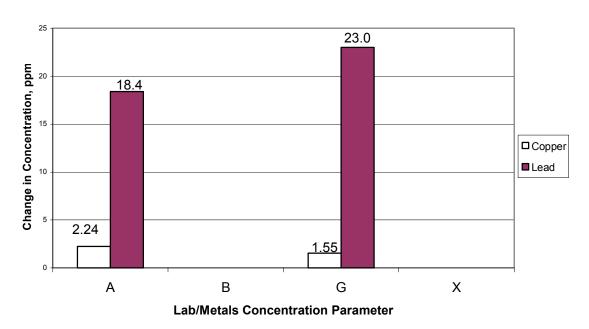
#### Precision Estimates by ASTM Report Period



## **Laboratory Severity and Precision**

The following plot shows the precision for this period, by lab.

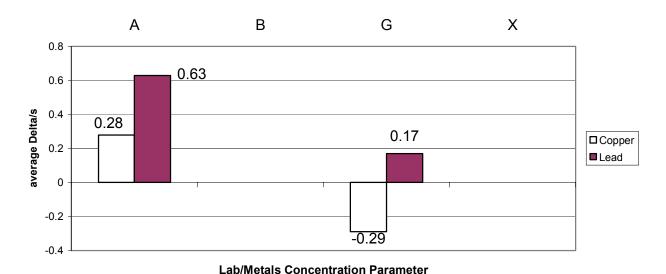
## Precision By Lab, TMC Oil 43



Precision estimates for Copper shows better precision at lab G. Precision estimates for Lead shows better precision at lab A. Precision estimates are not available for labs B and X (no test activity).

The following plot shows the average  $\Delta$ /s by laboratory and concentration parameter for this ASTM report period.

## Average Delta/s By Lab, TMC Oil 43



For both copper and lead, Lab A was severe compared to Lab G.

## Reference Oil Supply

Reference oil quantities available at the laboratories and TMC, as well as estimated life of these oils, are tabulated below.

Oil	TMC Inventory, in	TMC Inventory, in	Laboratory	Estimated life
	gallons	tests	Inventory, in tests	
43	58.8	~1880	27	10+ Years

### Information Letters and Memorandum

No information letters were issued this report period.

## **Additional Information**

The CBT database is available on the TMC's website. If you have any questions on how to access this information, contact the TMC.

JAC/jac/mem04-075.jac.doc

### c: CBT Surveillance Panel

ftp://ftp.astmtmc.cmu.edu/docs/bench/cbt/semiannualreports/cbt-10-2004.pdf

J. L. Zalar

F. M. Farber

Distribution: Email

765 22 01/2009 01/2009 01/01/03 01/2009 01/2009 01/2009 01/2009 675 88 CBT INDUSTRY OPERATIONALLY VALID DATA COUNT IN COMPLETION DATE ORDER 585 **<b>QUULTOS** ₹ 8 495 **CUSUM Severity Analysis** 360 405 450 COPPER CHANGE (ppm) Figure 1 **9612010 8677A**M **861UL**M 35 **86NALIO** 225 270 **Тетоо**ю **761ULM 76A9A**10 智 **TENALIO** 010CT96 <del>135</del> **9677AM** 8 **36NALIO 8 QUOCT95** 94111782 233 -127 83 B 203 -97 -67

Standard Deviation Units

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278EP04:14:4 855 Ě 765 720 01.000 01.000 01.000 01.000 01.000 01.000 01.000 01.000 01.000 675 88 CBT INDUSTRY OPERATIONALLY VALID DATA COUNT IN COMPLETION DATE ORDER 585 **3**5 495 00A9A10 00A9A10 00JUL10 00TOO10 **CUSUM Severity Analysis** 360 405 450 LEAD CHANGE (ppm) eenaln eenaan ee iuin eetoon Figure 2 **961200 8677An 861Uln** 315 225 270 **86NAL**10 **МОСТ97 Հ6**ገՈՐI0 **76A9A**10 8 **Теиа**сто **0100CT96** 35 **9670**FW **96719A10** 8 **96NALM** 8 **QUOCT95 SETIFIFE** 53 -97 -37 -157 -127 -67 R -307 -247 -217 -187 -277 Standard Deviation Units