MEMORANDUM: 03-031

DATE: April 9, 2003

TO: Jerry Wang, Chairman, CBT Surveillance Panel

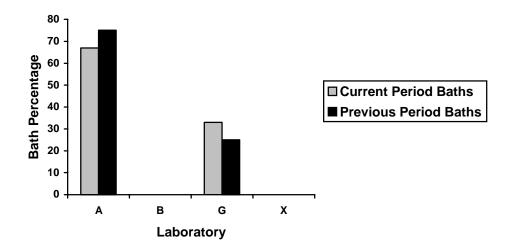
FROM: Jeff Clark

SUBJECT: Corrosion Bench Test Status from October 1, 2002 through March 31, 2003

A total of 29 Corrosion Bench Test results from three baths in two labs were reported to the TMC during the period from October 1, 2002 through March 31, 2003.

The following chart shows the distribution by laboratory.

Laboratory/Bath Distribution



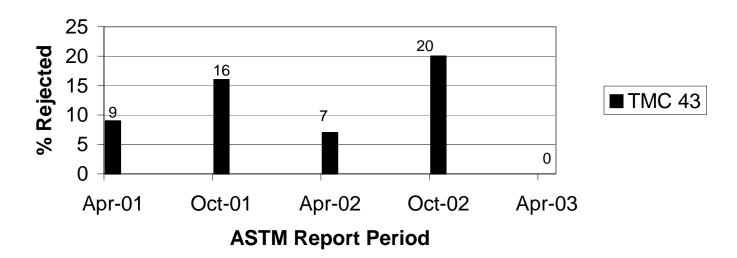
The following summarizes the status of the reference oil tests reported to the TMC:

	TMC Validity Codes	No. of Tests
Operationally and Statistically Acceptable	AC	28
Failed Acceptance Criteria	OC	0
Declared Invalid by Laboratory	LC	1
Aborted	XC	0
Total		29

There was one operationally invalid test reported. The test was invalid due to a bath malfunction. There were no statistically unacceptable tests this period.

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



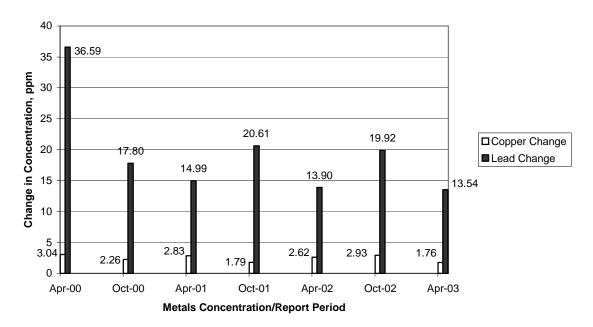
Industry Severity and Precision

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	ΔCu	ΔPb
		Mean ∆/s	Mean ∆/s
10/1/02 through 3/31/03	29	0.11	-0.04
4/1/02 through 9/30/02	41	0.32	0.38
10/1/01 through 3/31/02	27	0.37	-0.23
4/1/01 through 9/30/01	25	0.78	0.13
10/1/00 through 3/31/01	33	0.44	-0.68

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 trending slightly severe for the period. Figure 2 shows lead change to be on target for the period. Precision estimates, by report period are depicted below. Precision for both Cu and Pb change show improvement compared to both the previous period and historical levels (see chart below).

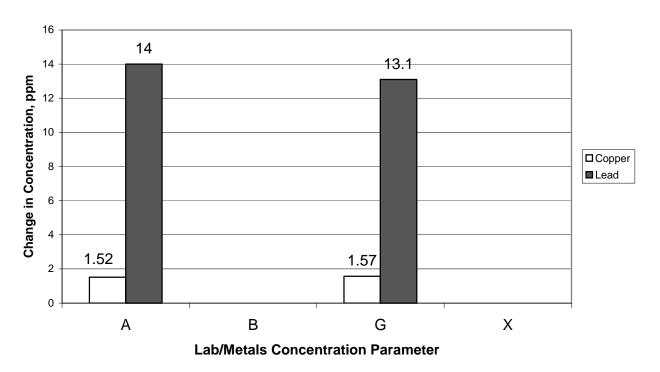
Precision Estimates by ASTM Report Period



Laboratory Severity and Precision

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

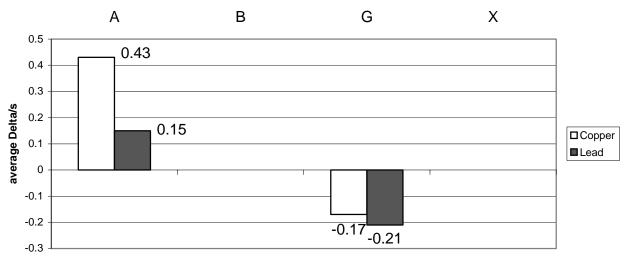
Precision By Lab, TMC Oil 43



Precision estimates for both Lead and Copper illustrate good agreement between labs A and B. Precision estimates are not available for labs B and X (no test activity).

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

Average Delta/s By Lab, TMC Oil 43



Lab/Metals Concentaration Parameter

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

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	62.3	~2000	53	10+ Years

Information Letters and Memoranda

There were no information letters or TMC Memoranda pertaining to the Corrosion Bench Test area this 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/mem03-031.jac.doc

c: CBT Surveillance Panel

J. L. Zalar

F. M. Farber

ftp://ftp.astmtmc.cmu.edu/docs/bench/cbt/semiannualreports/cbt-04-2003.pdf

Distribution: Email

TMC 09APR03:08:52 560 595 630 665 700 **EONAL10** 010CT02 O110LO2 10AGL10 10AGA10 10JUL10 10TO010 20MAU10 20AGL10 525 210 245 280 315 350 385 420 455 490 COUNT IN COMPLETION DATE ORDER 010010 0170700 00NAL10 0099A10 01APR99 01JUL99 01OCT99 **CUSUM Severity Analysis** COPPER CHANGE (ppm) 66NAL10 010CT98 01APR98 01JUL98 86NAL10 010CT97 76JUL10 76A9A10 175 76NAL10 140 010CT96 9670110 105 96A9A10 96NAL10 2 35 20 -25 -30 -35 -45 -50 -55 -60 -65 - 70 - 75 - 75 - 80 - 85 - 85 -9 40 Standard Deviation Units

TMC 09APR03:08:52 NO0 200 920 **EONAL10** 010CT02 2002 OJULLO2 010CT01 01JAN02 01APR02 000 01APR01 01JUL01 272 IONALIO 400 COUNT IN COMPLETION DATE ORDER 010CT00 ОЈППГОО 4 5 5 00A9A10 OONALIO 400 010CT99 **CUSUM Severity Analysis** 01APR99 0.00LEAD CHANGE (ppm) 66NAL10 020 010CT98 0170168 2 - 3 86A9A10 86NAL10 0 80 010CT97 Q 4 D 76JUL10 0 **-** 0 V1APR97 76NAL10 0100196 40 9670110 01APR96 207 96NAL10 **^**0 010CL62 $_{\Omega}$ *€€*786₽ 0 Standard Deviation Units

Figure 2 CBT INDUSTRY OPERATIONALLY VALID DATA