



# Test Monitoring Center

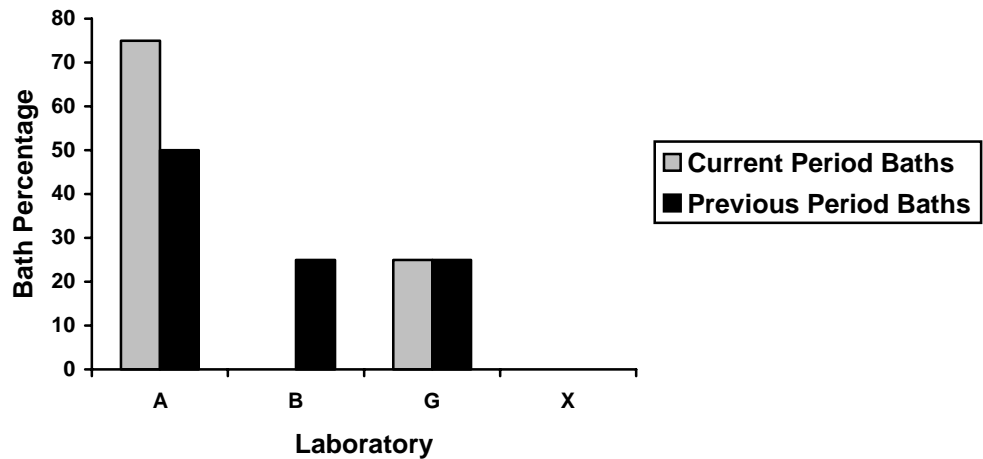
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MEMORANDUM: 02-089  
DATE: October 8, 2002  
TO: Jerry Wang, Chairman, CBT Surveillance Panel  
FROM: Jeff Clark  
SUBJECT: Corrosion Bench Test Status from April 1, 2002 through September 30, 2002

A total of 41 Corrosion Bench Test results from four baths in two labs were reported to the TMC during the period from April 1, 2002 through September 30, 2002.

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	33
Failed Acceptance Criteria	OC	8
Declared Invalid by Laboratory	LC	0
Aborted	XC	0
<b>Total</b>		<b>41</b>

There were no operationally invalid tests reported.

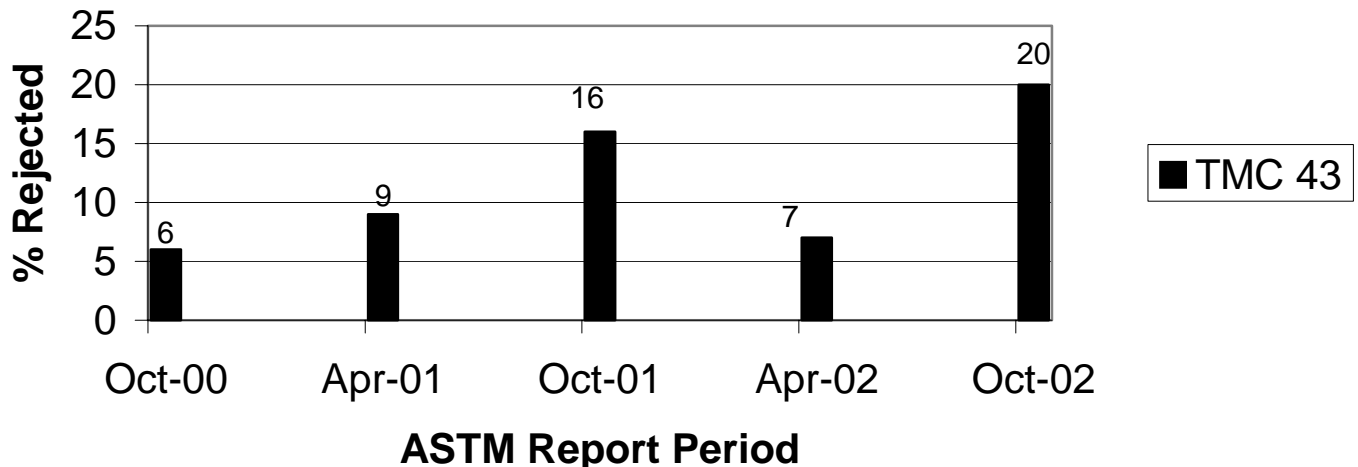
The following tabulates the statistically unacceptable tests:

Reason	Number of Tests
Mild Pb	2
Severe Pb	4
Severe Cu	1
Severe Cu, Pb	1

A total of 41 operationally valid results were run on reference oil 43, of which 8 failed (20% fail rate).

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



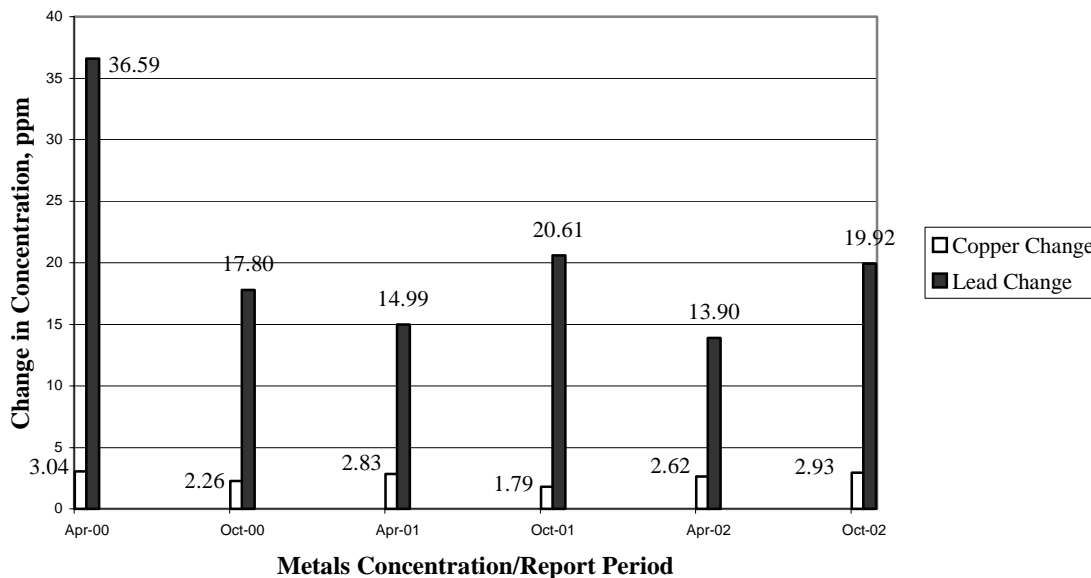
Industry Severity and Precision

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	$\Delta$ Cu	$\Delta$ Pb
		Mean $\Delta/s$	Mean $\Delta/s$
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
4/1/00 through 9/30/00	33	-0.33	-0.14

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 severe for the period. Figure 2 shows lead change trending severe for the period. Precision estimates, by report period are depicted below. Precision for both Cu and Pb change show some degradation compared to the previous period, however, both are still within historical levels (see chart below).

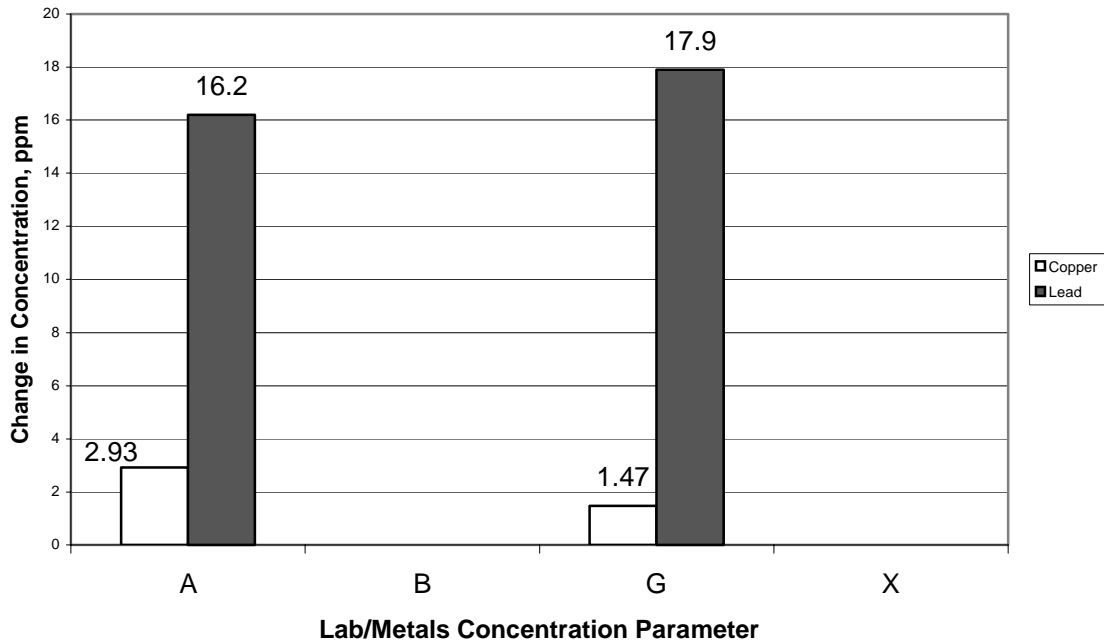
**Precision Estimates by ASTM Report Period**



Laboratory Severity and Precision:

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

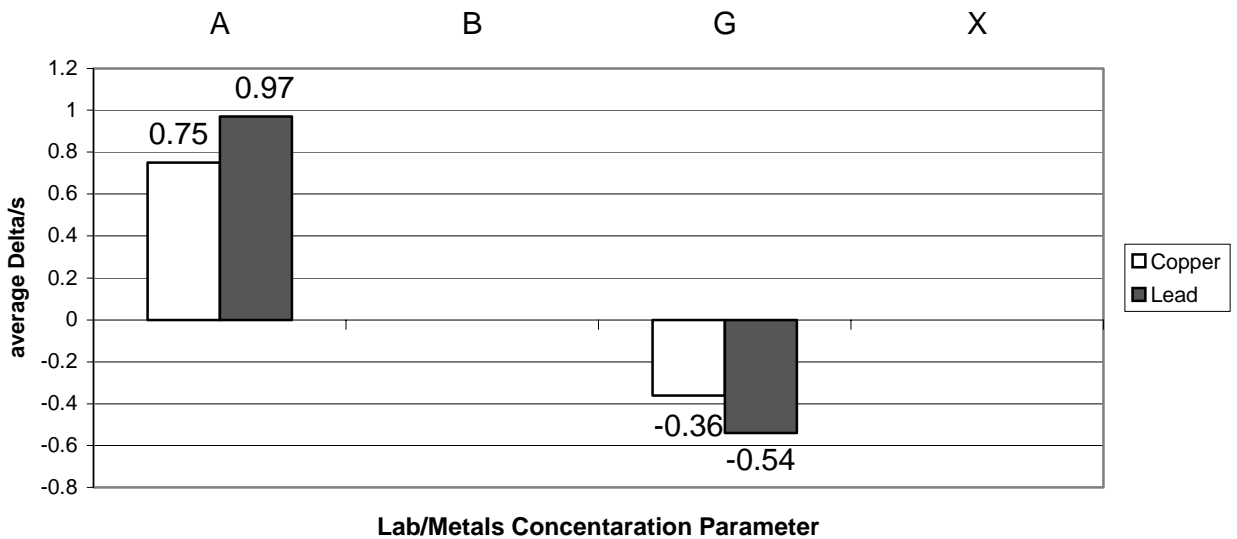
**Precision By Lab, TMC Oil 43**



Precision estimates for Lead illustrate good agreement between labs A and B. Precision estimates for Copper show lab A demonstrating more variability. 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 and Lab GB 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 gallons	TMC Inventory, in tests	Laboratory Inventory, in tests	Estimated life
43	62.81	>2000	62	10+ Years

Information Letters and Memorandum

There were no information letters or TMC Memorandum 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/mem02-089.jac.doc

c: CBT Surveillance Panel

<ftp://ftp.astmtmc.cmu.edu/docs/bench/cbt/semiannualreports/cbt-10-2002.pdf>

J. L. Zalar

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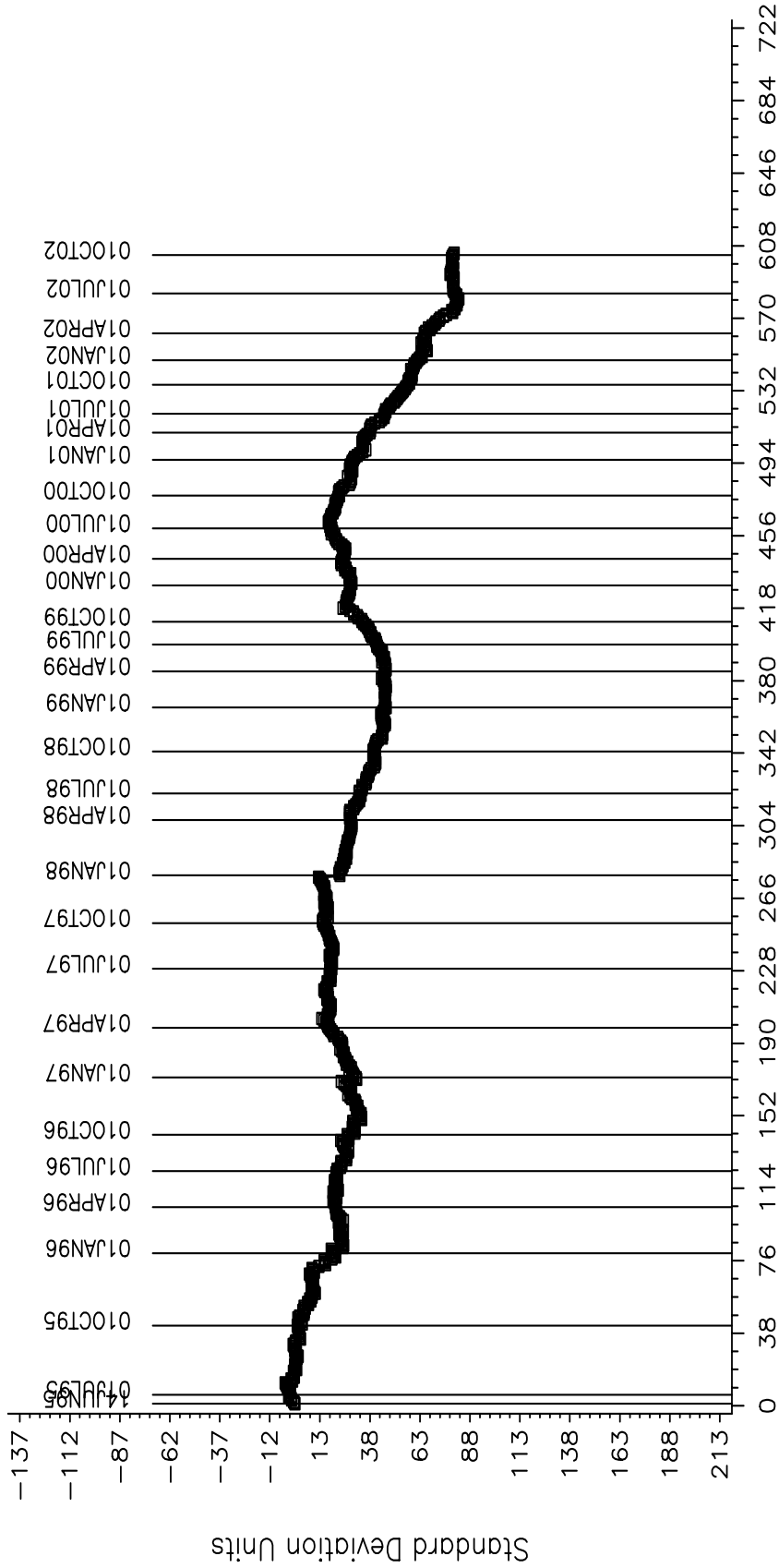
Distribution: Email

**Figure 1**

CBT INDUSTRY OPERATIONALLY VALID DATA

COPPER CHANGE (ppm)

CUSUM Severity Analysis



COUNT IN COMPLETION DATE ORDER

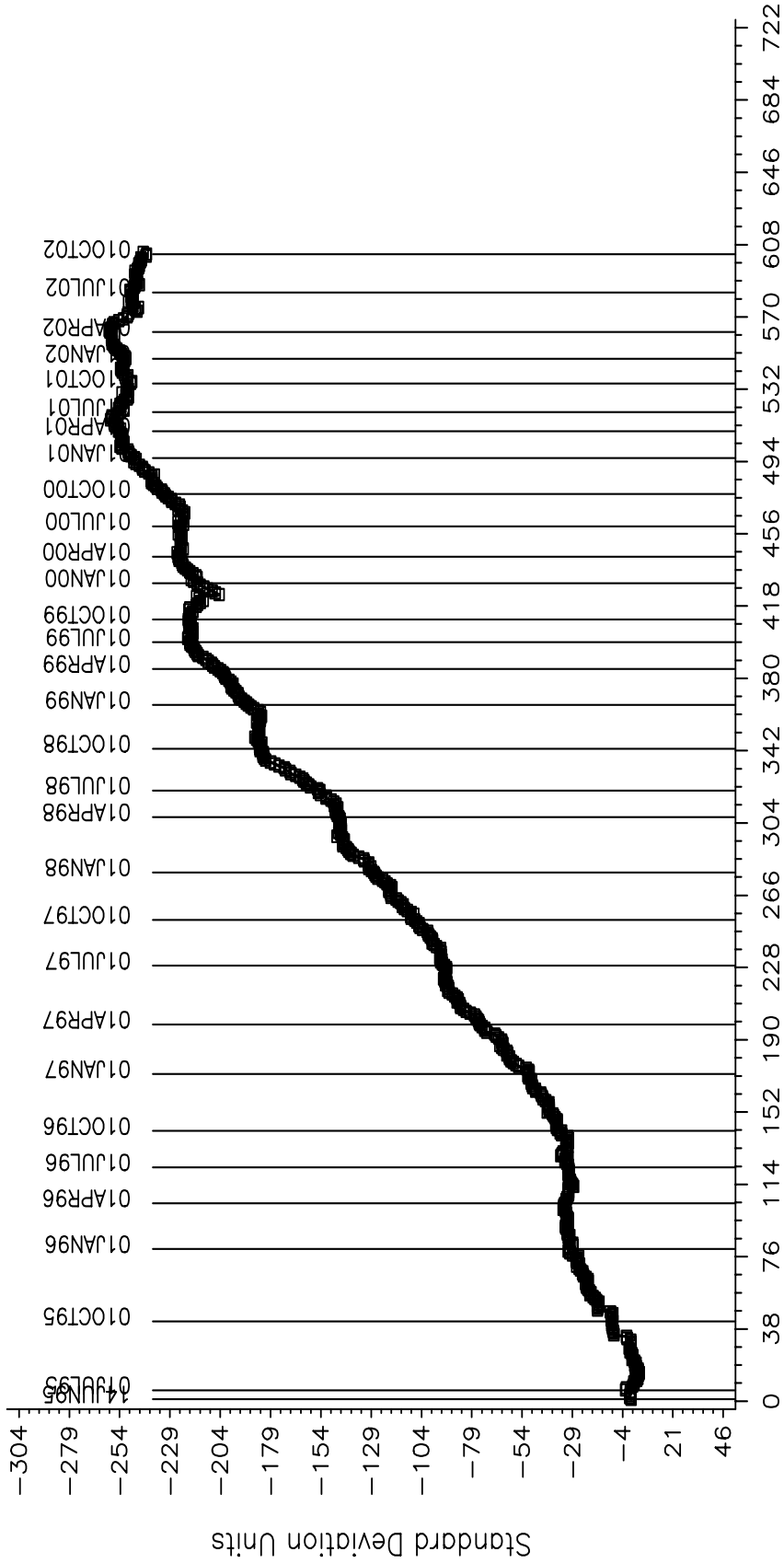
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**Figure 2**

CBT INDUSTRY OPERATIONALLY VALID DATA

LEAD CHANGE (ppm)

CUSUM Severity Analysis



COUNT IN COMPLETION DATE ORDER

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