Test Monitoring Center
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MEMORANDUM: 01-038

DATE: April 17, 2001

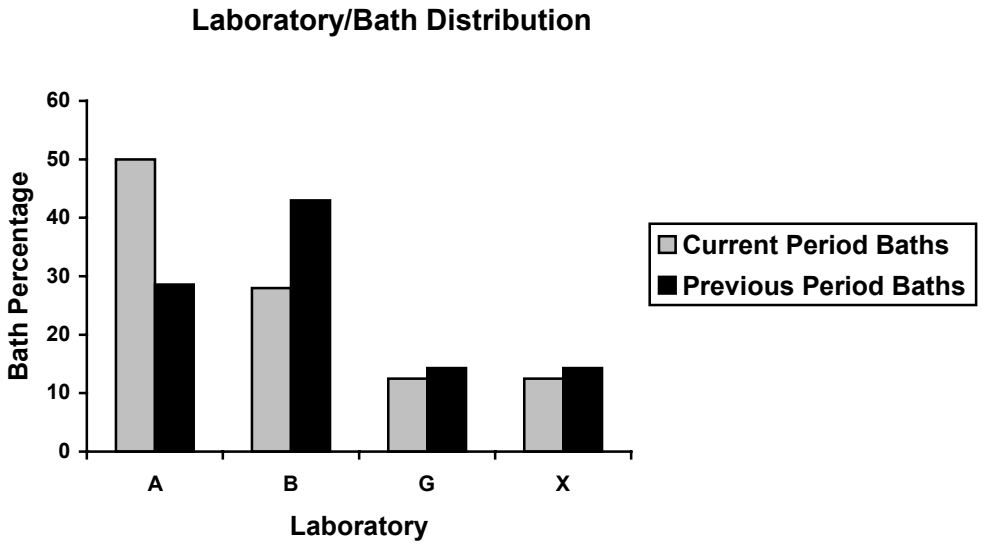
TO: Jerry Wang, Chairman, CBT Surveillance Panel

FROM: Richard E. Grundza

SUBJECT: Corrosion Bench Test Status from October 1, 2000 through March 31, 2001

A total of 34 Corrosion Bench Test results from eight baths in four labs were reported to the TMC during the period from October 1, 2000 through March 31, 2001.

The following chart shows the distribution by laboratory.



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	30
Failed Acceptance Criteria	OC	3
Data not Used for Statistics	MC	1
Total		34

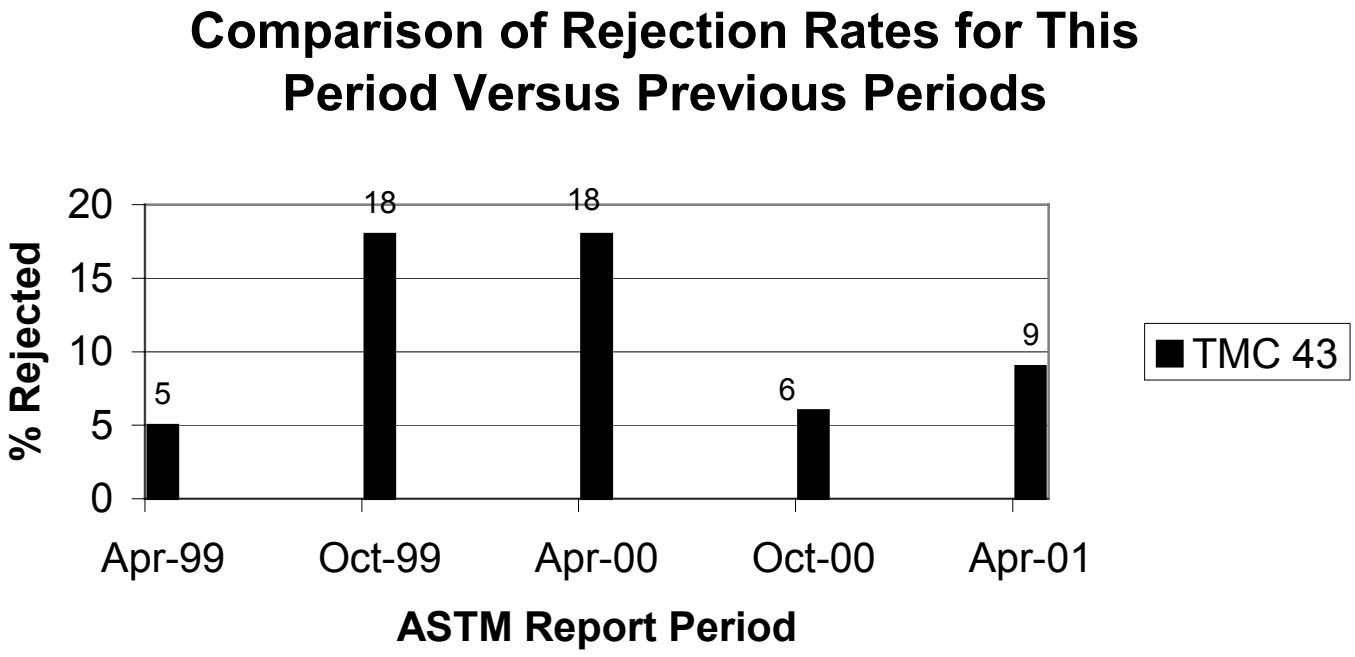
Data from one test was not included for statistics. This data was from a laboratory which had not calibrated and was making changes in sample preparation to more closely match other test laboratories. The laboratory has since successfully calibrated.

The following tabulates the statistically unacceptable tests:

Reason	Number of Tests
Mild Pb	2
Cu Severe	1

A total of 33 operationally valid results run on reference oil 43 of which 3 failed (9% fail rate).

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

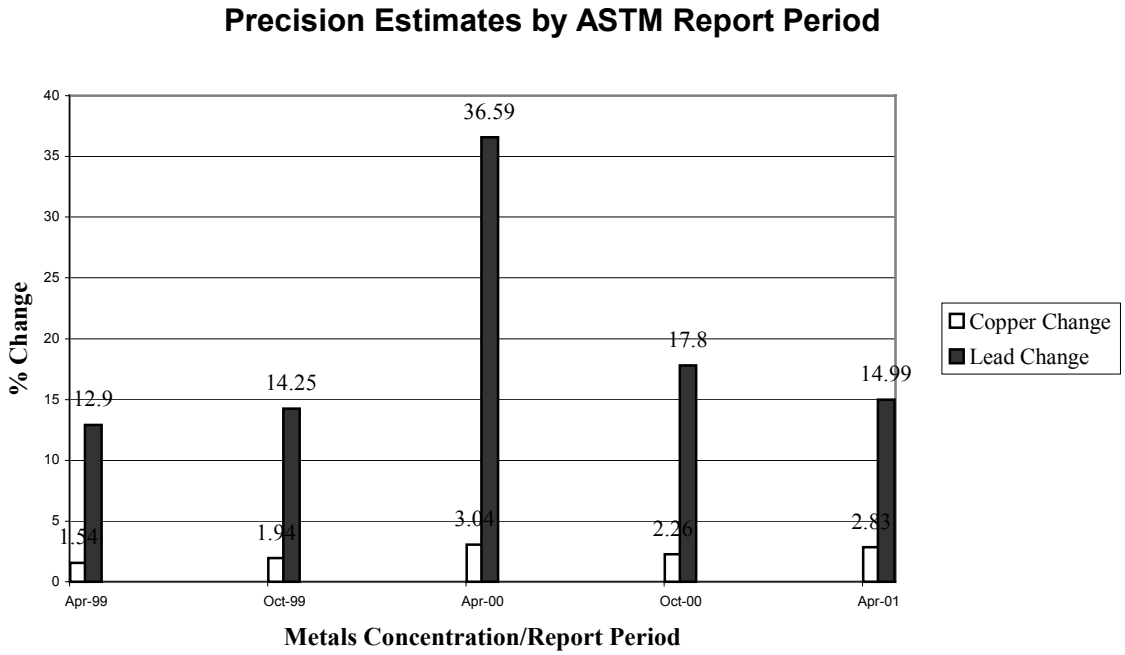


Industry Severity and Precision

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	□ Cu	□ Pb
		Mean □/s	Mean □/s
10/1/98 through 3/31/99	35	0.02	-0.58
4/1/99 through 9/30/99	26	-0.39	-0.61
10/1/99 through 3/31/00	33	-0.40	-0.27
4/1/00 through 9/30/00	33	-0.33	-0.14
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 severe for the period. Figure 2 shows lead change severity trending mild during the period. Precision estimates, by report period are depicted below. Precision for both Cu and Pb change compares well with both the previous period and historical estimates.

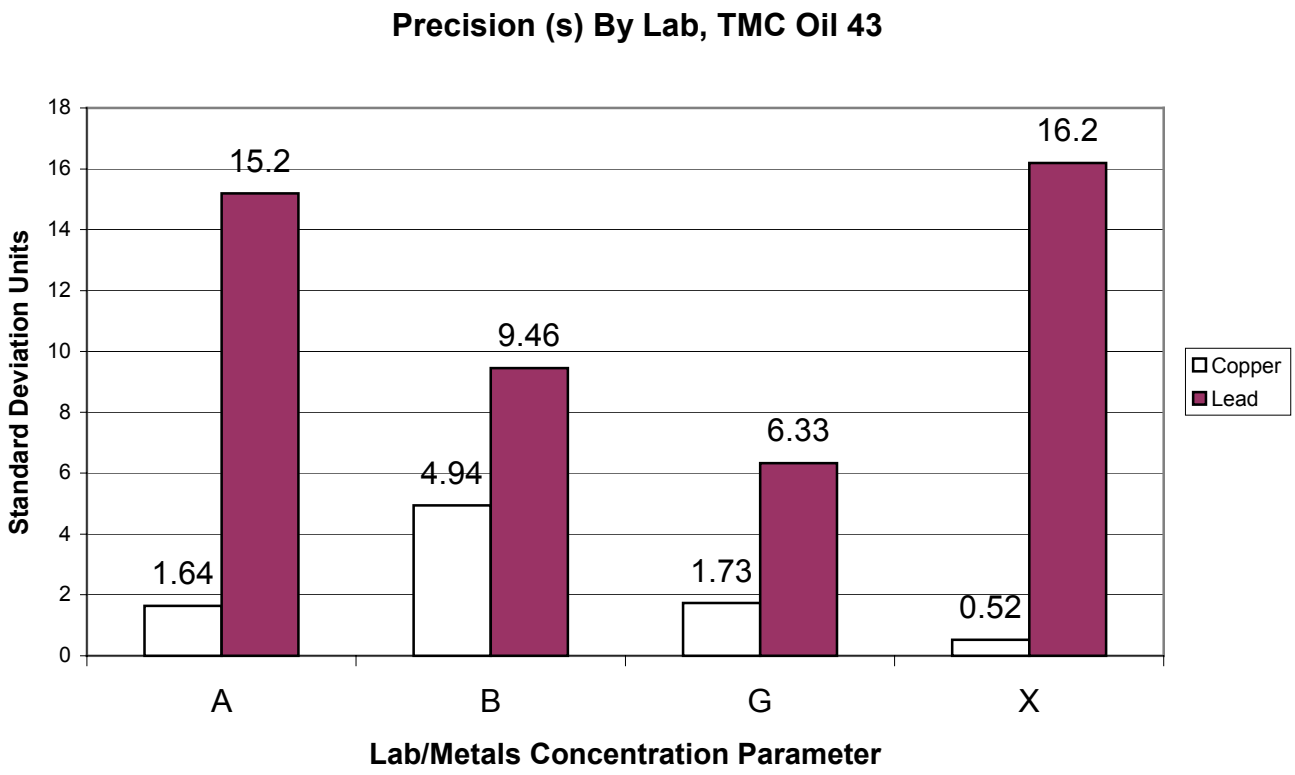


Precision estimates for both Copper and Lead change compare well with the previous and with historical estimates.

The average change in concentration, standard deviation, and average delta/s, are tabulated by laboratory below.

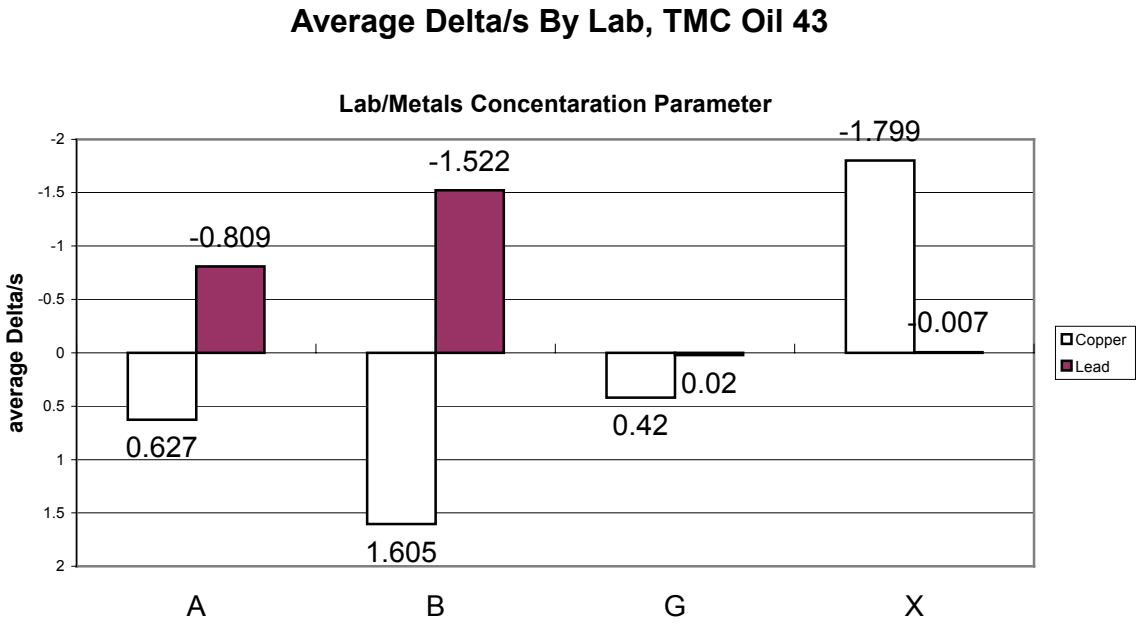
Lab	N	□ Cu mean	□ Cu s	□ Cu mean □/s	□ Pb mean	□ Pb s	□ Pb mean □/s
A	24	20.1	1.64	0.627	107.7	15.2	-0.809
B	2	23.0	4.95	1.605	97.3	9.5	-1.522
G	4	19.5	1.73	0.424	119.9	6.3	0.022
X	3	13.0	0.53	-1.799	119.5	16.3	-0.006

The following plots show the precision for this period, by lab.



Precision estimates for Copper illustrate good agreement between labs A, G and X, with somewhat higher variability noted in Lab B, though lab B reported only two results this period. Labs A and X have higher variability than labs B and G.

The following plots the average □/s by laboratory and concentration parameter for this ASTM report period



Lab X was mild on Copper for the period, while the remaining labs all tended to be severe. Labs A and B were mild on Lead while the other two labs appeared to be on or near target.

Reference Oil Supply

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

Oil	TMC Inventory, in gallons	TMC Inventory, in tests	Laboratory Inventory, in tests	Estimated life
43	66.26	2000	56	10+ Years

Information Letters and Memorandum

There were no information letters or TMC Memorandum pertaining to the corrosion Bench Test area this period.

Summary

□ Cu was severe for the period, while □ Pb trended mild this report period. Precision for both parameters compares well with the previous period and historical rates. Rejection levels are somewhat higher than the previous period, but compare well with historical rates.

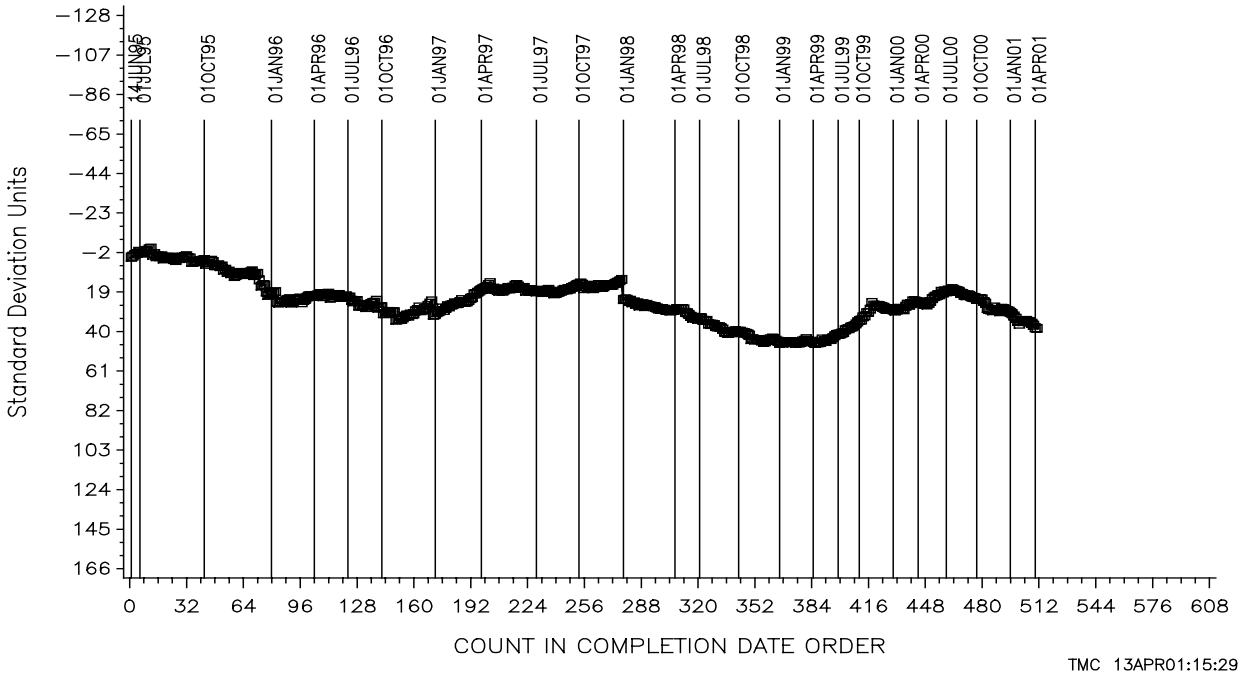
REG/reg
c: CBT Surveillance Panel
ftp://www.tmc.astm.cmri.cmu.edu/docs/bench/cbt/semiannualreports/cbt-4-2001
J. L. Zalar
F. M. Farber

CBT INDUSTRY OPERATIONALLY VALID DATA

Figure 1

REF. COPPER CHANGE IN CONCENTRATION □% (PPM)

CUSUM Severity Analysis



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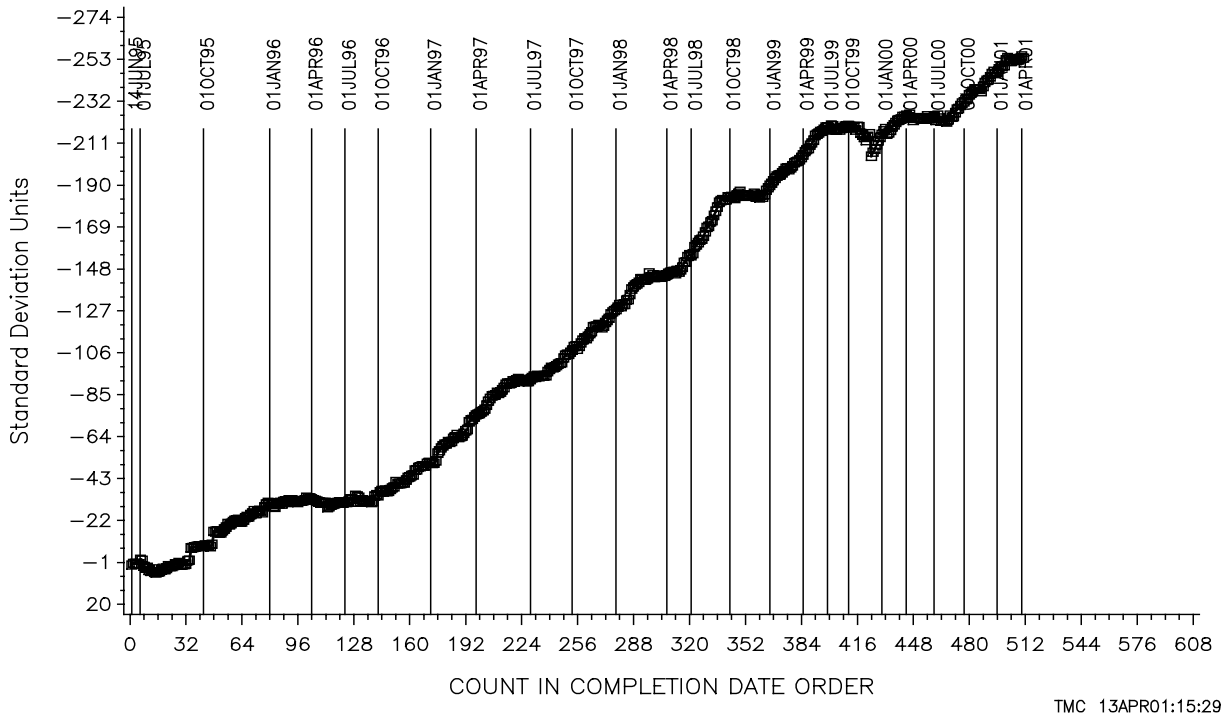
CBT INDUSTRY OPERATIONALLY VALID DATA

Figure 2

REF. LEAD CHANGE IN CONCENTRATION □% (PPM)

CUSUM Severity Analysis



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