Test Monitoring Center
6555 Penn Avenue
Pittsburgh, PA 15206-4489
(412) 365-1000

MEMORANDUM: 05-086

DATE: November 14, 2005

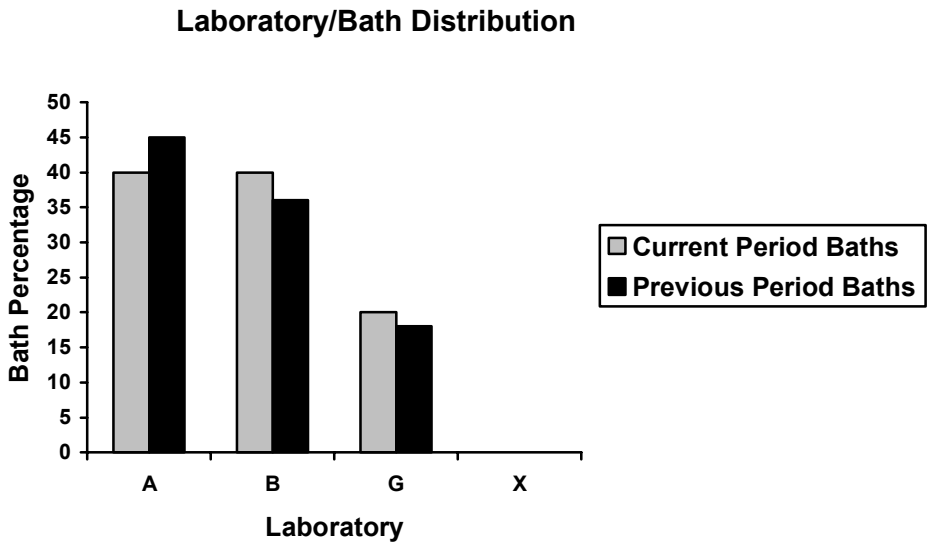
TO: Gil Reinhard, Chairman, CBT Surveillance Panel

FROM: Jeff Clark

SUBJECT: High Temperature Corrosion Bench Testing for the October 2005 Report Period

A total of 156 High Temperature Corrosion Bench Test results from ten baths in three labs were reported to the TMC during the October 2005 ASTM report period, which began on April 1, 2005 and ended on September 30, 2005.

The following chart shows the distribution by laboratory.

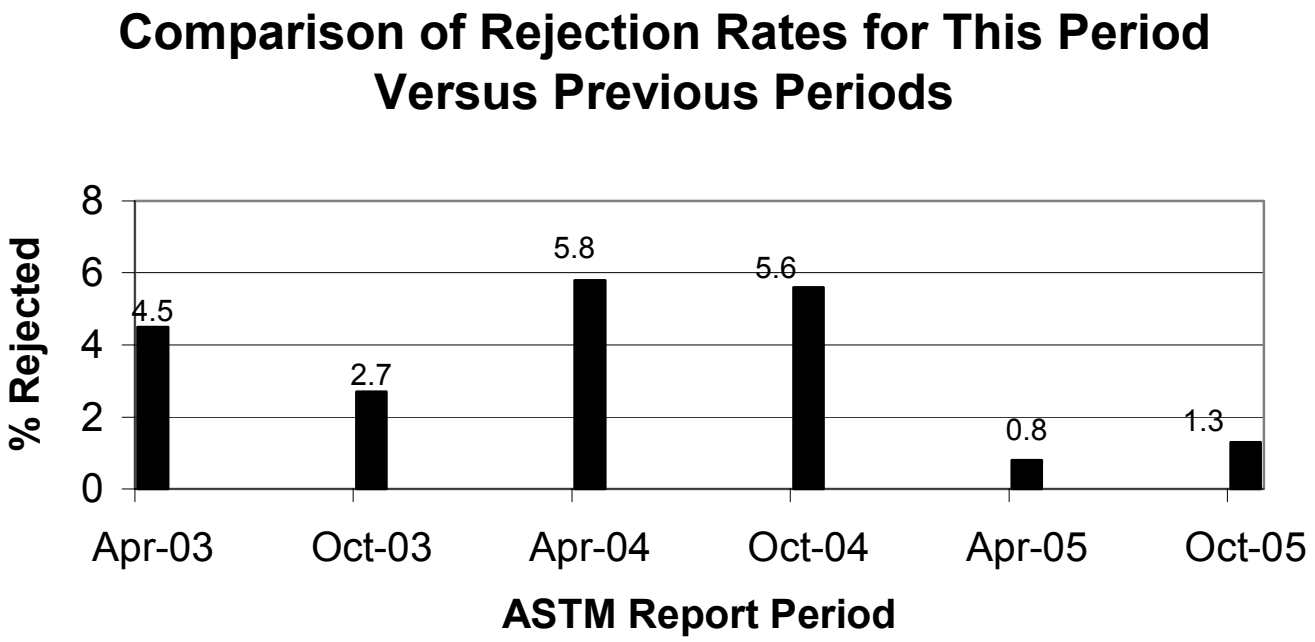


The following summarizes the status of the reference oil tests reported to the TMC:

	TMC Validity Codes	No. of Tests
Operationally and Statistically Acceptable	AC	152
Failed Acceptance Criteria	OC	2
Declared Invalid by Laboratory	LC	1
Aborted	XC	1
Total		156

Both tests that failed the acceptance criteria were due to severe copper. One test was invalid because it ran beyond the standard test length. One test was aborted due to a mechanical failure.

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

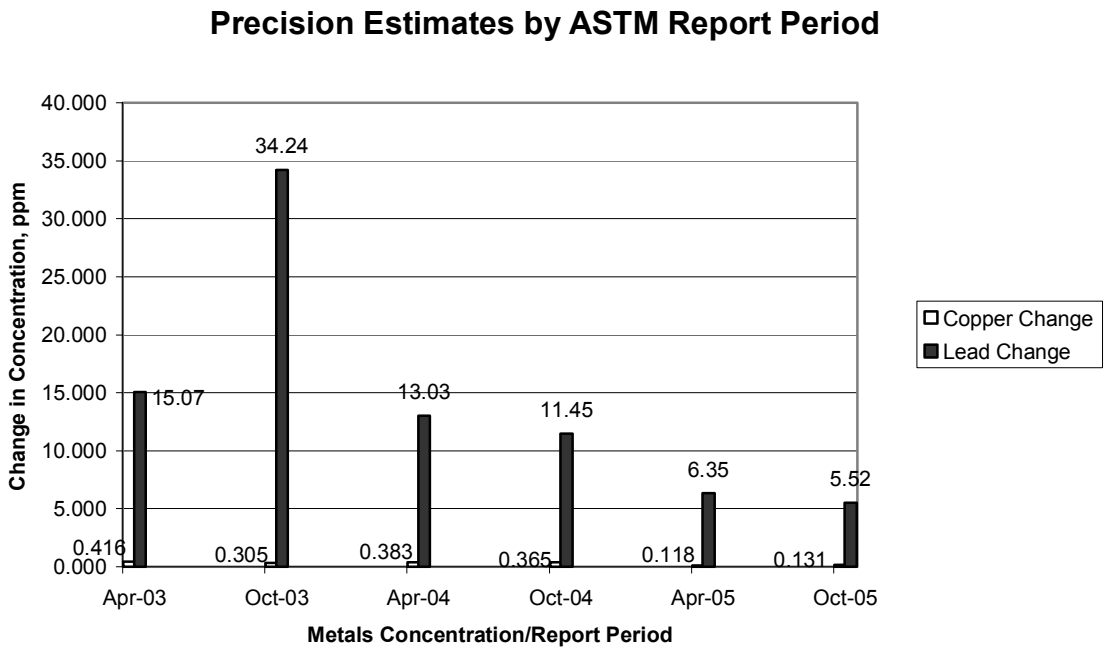


Industry Severity and Precision

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

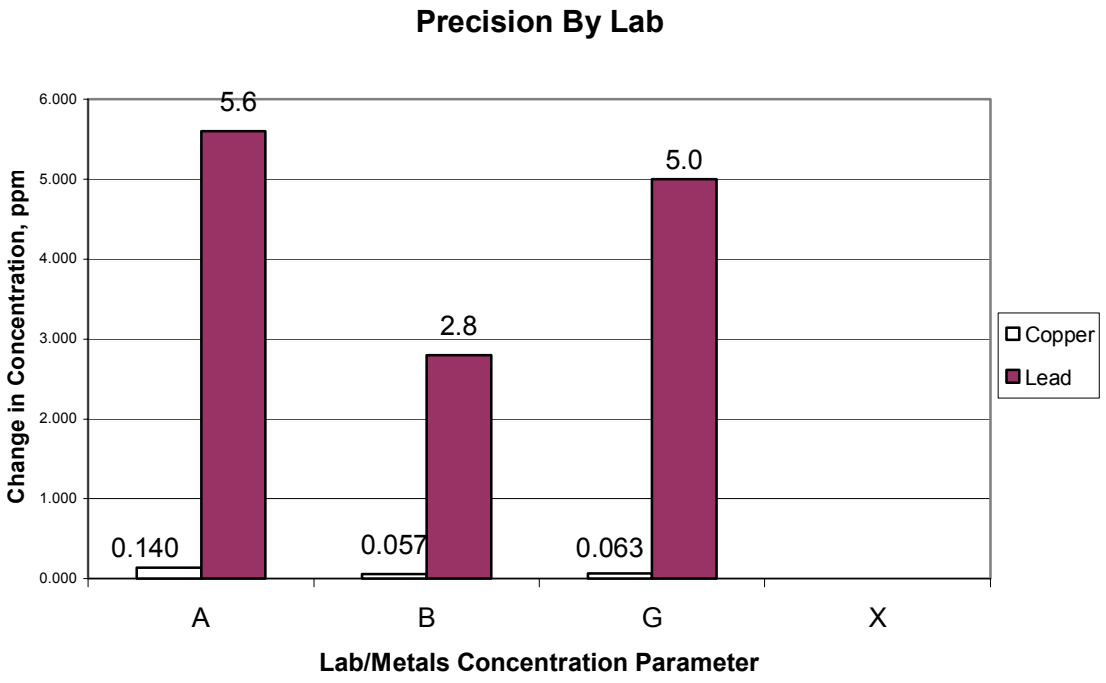
Period	n	Δ Cu	Δ Pb
		Mean Δ/s	Mean Δ/s
4/1/05 through 9/30/05	154	0.65	-0.28
10/1/04 through 3/31/05	131	0.68	-0.36
4/1/04 through 9/30/04	142	1.03	-0.26
10/1/03 through 3/31/04	120	0.35	-0.22
4/1/03 through 9/30/03	111	0.01	0.07

Figures 1 and 2 plot the Summation delta/s from target for change in copper and change in lead, respectively. Figure 1 shows copper change to be severe for the period. Figure 2 shows lead change to be mild for the period. Precision estimates, by report period are depicted below. Precision for both Cu change and Pb change shows some improvement compared to historical levels.



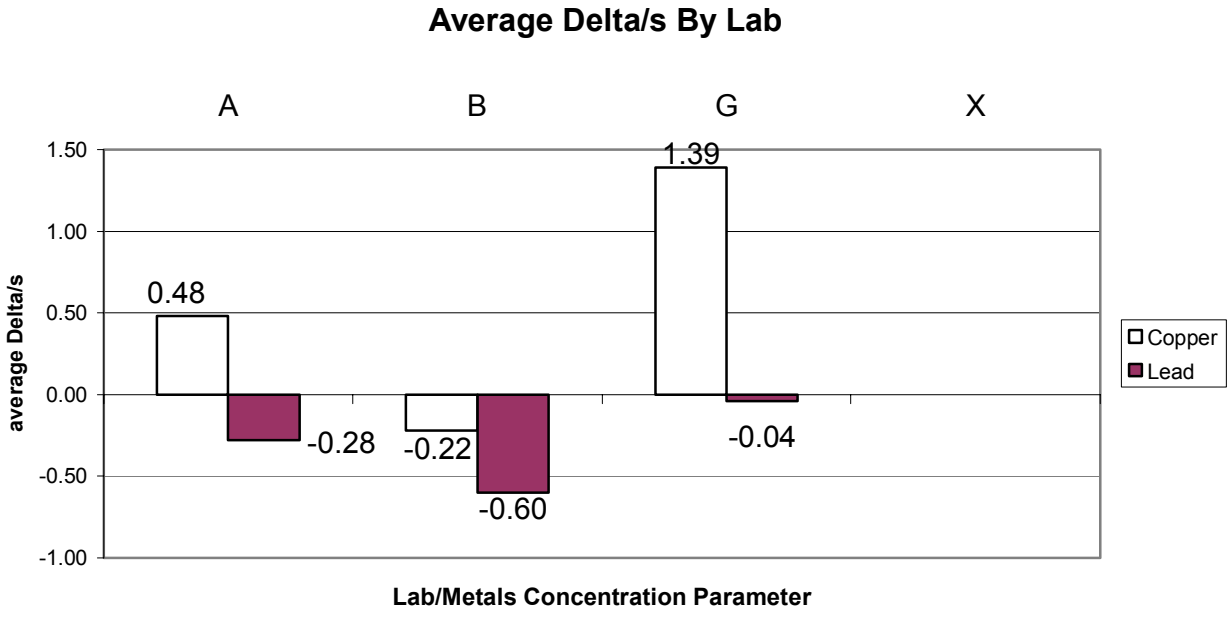
Laboratory Severity and Precision

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



Precision estimates for Copper shows better precision at lab B and G than at lab A. Precision estimates for Lead shows better precision at lab B than at labs G and A.

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



For both copper and lead, Lab G was the most severe and lab B the most 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
1005	45.5	~1450	55	5 years

The TMC supply of oil 42 has been exhausted. The TMC has obtained reference oil 44 and an industry matrix is currently being run to establish reference test targets.

Information Letters

No information letters were issued this ASTM period.

Additional Information

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

JAC/jac/mem05-086.jac.doc

c: HTCBT Surveillance Panel
ftp://ftp.astmtmc.cmu.edu/docs/bench/htcbt/semiannualreports/htcbt-10-2005.pdf
J. L. Zalar
F. M. Farber

Distribution: Email

Figure 1

HIGH TEMP CBT INDUSTRY OPERATIONALLY VALID DATA

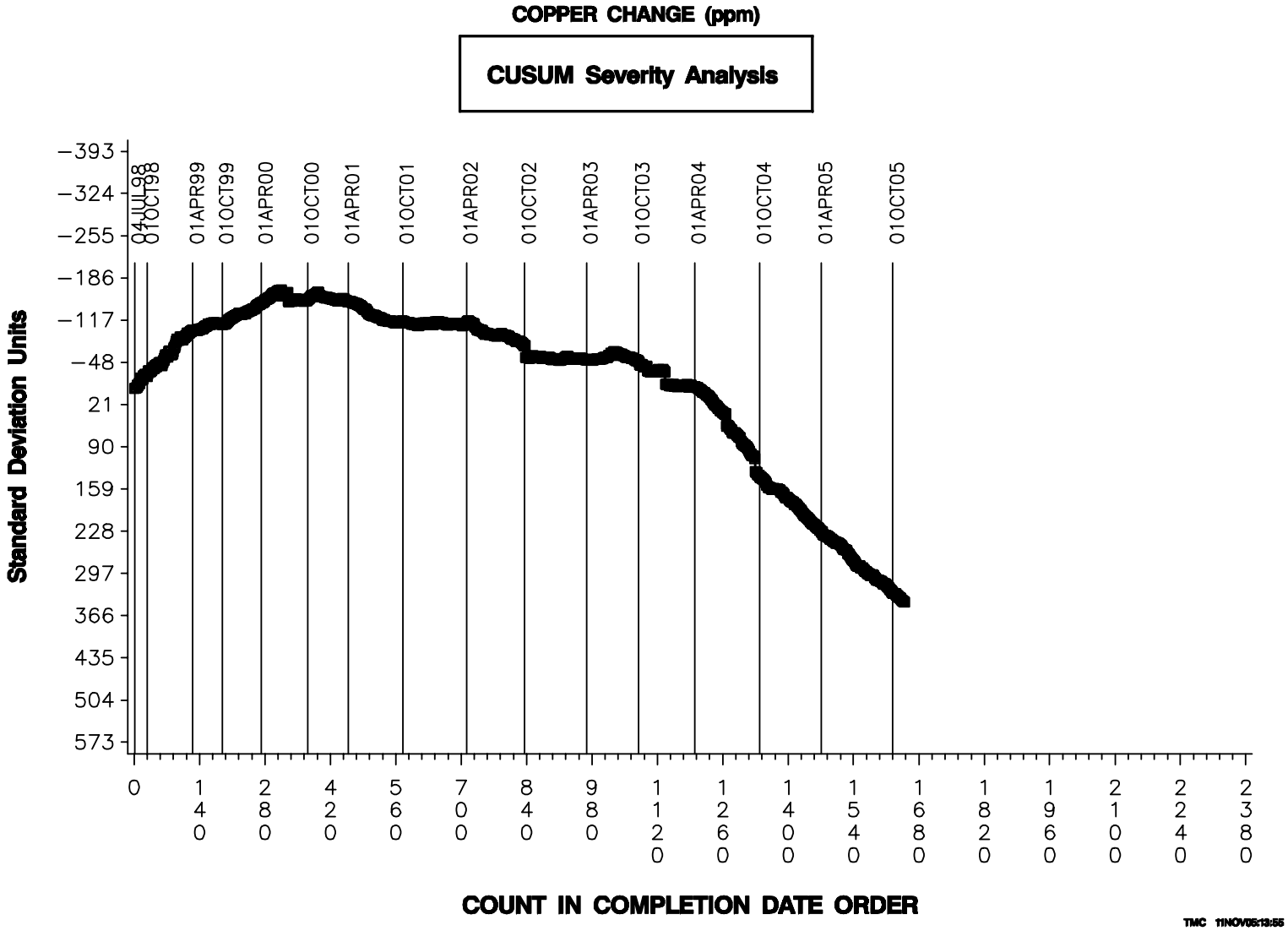


Figure 2

HIGH TEMP CBT INDUSTRY OPERATIONALLY VALID DATA