



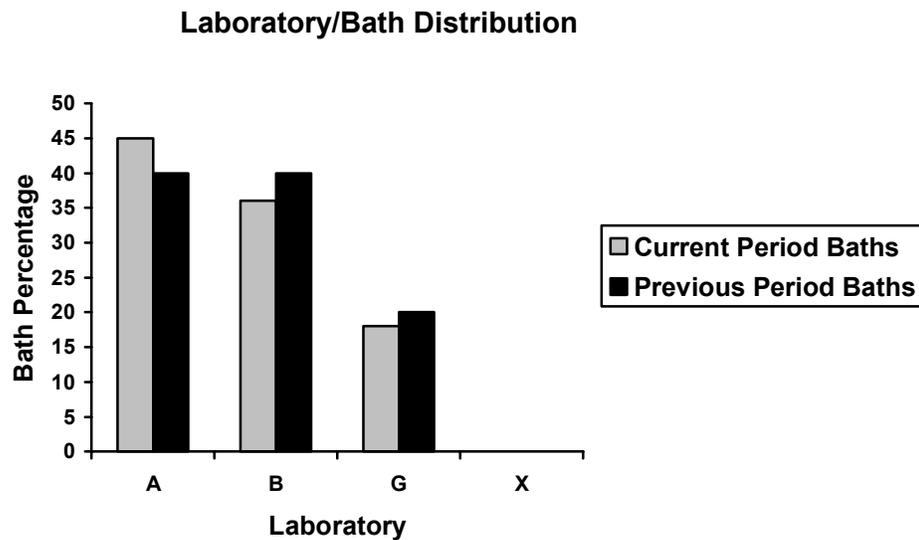
Test Monitoring Center

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(412) 365-1000

MEMORANDUM: 05-048
DATE: June 7, 2005
TO: Joe Franklin, Chairman, CBT Surveillance Panel
FROM: Jeff Clark
SUBJECT: High Temperature Corrosion Bench Testing for the April 2005 Report Period

A total of 155 High Temperature Corrosion Bench Test results from eleven baths in three labs were reported to the TMC during the April 2005 ASTM report period, which began on October 1, 2004 and ended on March 31, 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	130
Failed Acceptance Criteria	OC	1
Declared Invalid by Laboratory	LC	17
Aborted	XC	1
Acceptable Donated Test	AG	6
Total		155

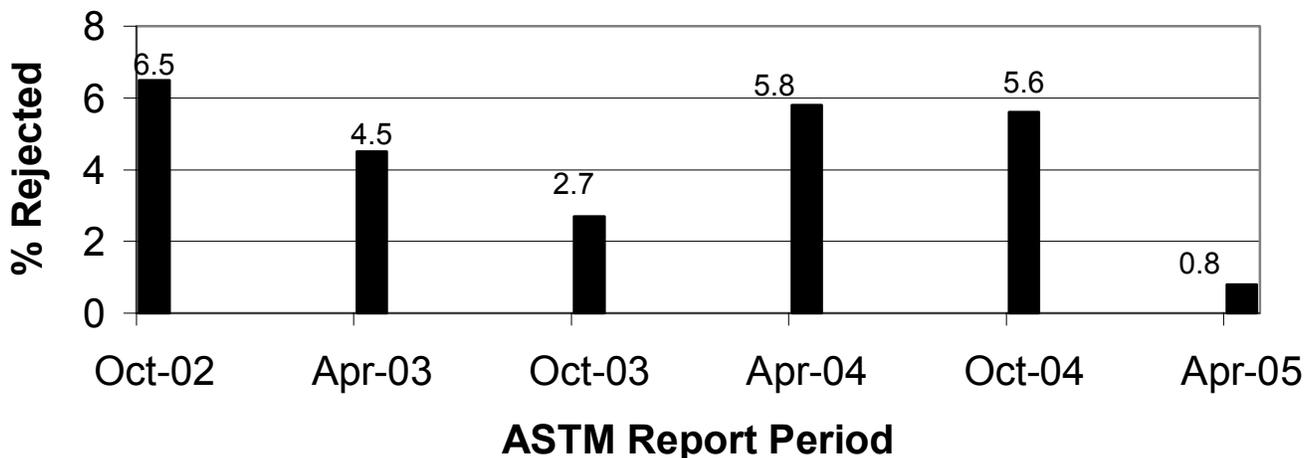
All 17 tests declared invalid by the lab were due to mass airflow control problems. The majority of these tests were originally reported as valid. Because an unusually high number of these tests failed the acceptance criteria the test laboratory launched an investigation into their operations. The lab found long-term mass airflow control and calibration issues and subsequently invalidated these tests and fixed the control and calibration issues.

One test was aborted due to a mechanical failure. All 6 donated tests were run as part of an industry-wide matrix on a new coupon batch. The table below tallies the statistically unacceptable test(s):

Reason	Number of Tests
Severe Copper, Severe Lead	1

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



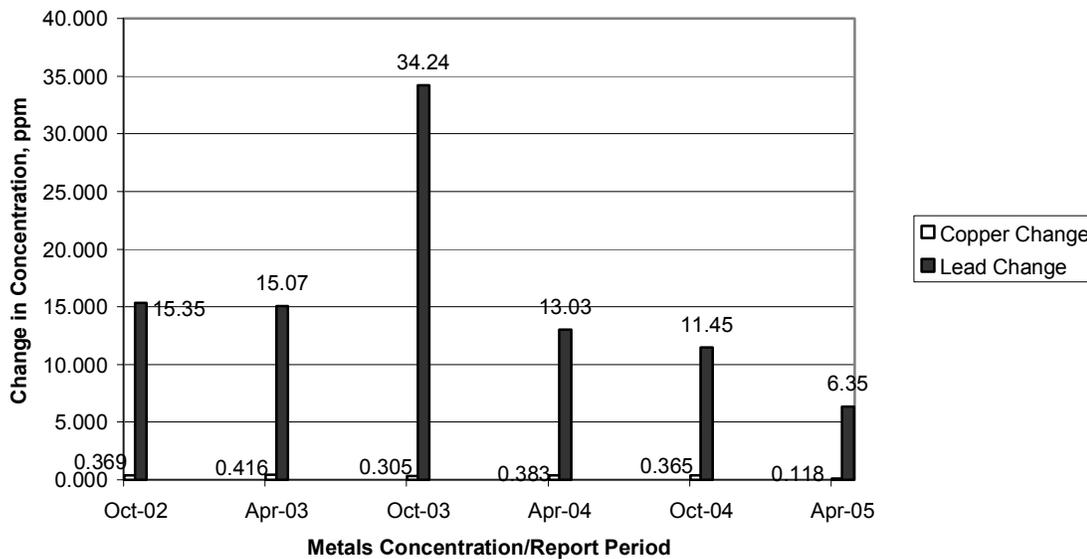
Industry Severity and Precision

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	Δ Pb
		Mean Δ /s	Mean Δ /s
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
10/1/02 through 3/31/03	134	0.01	-0.26

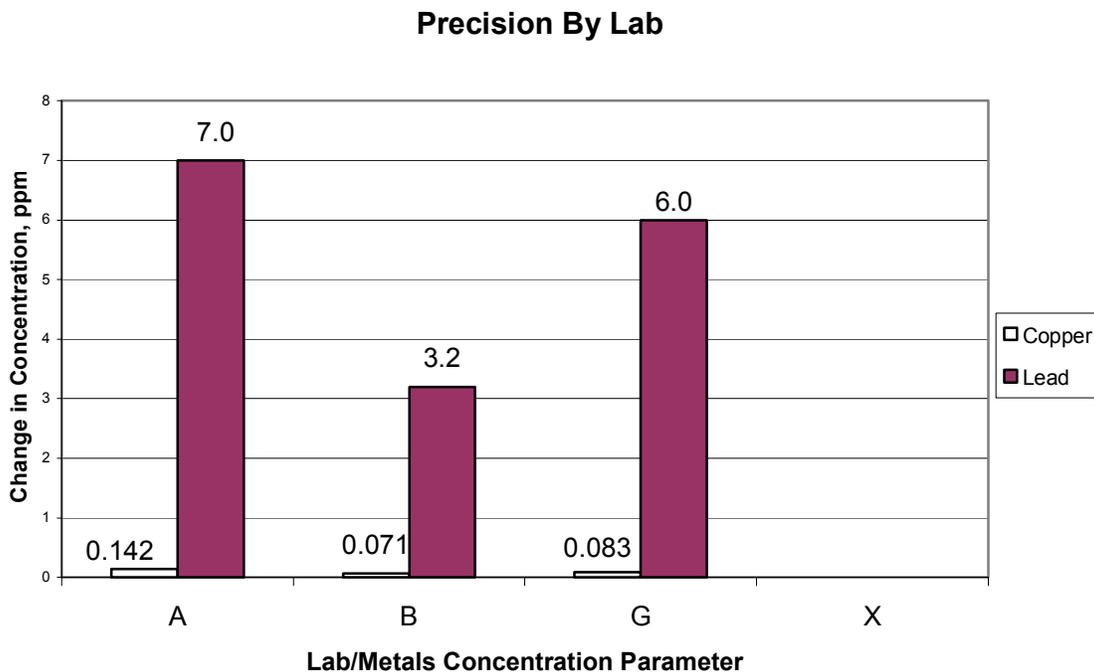
Figures 1 and 2 plot the Summation delta/s from target for both change in copper and change in lead, respectively. Figure 1 shows copper change to be severe for the period. Figure 2 shows lead change to be mild for the period. Precision estimates, by report period are depicted below. Precision for both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

Precision Estimates by ASTM Report Period



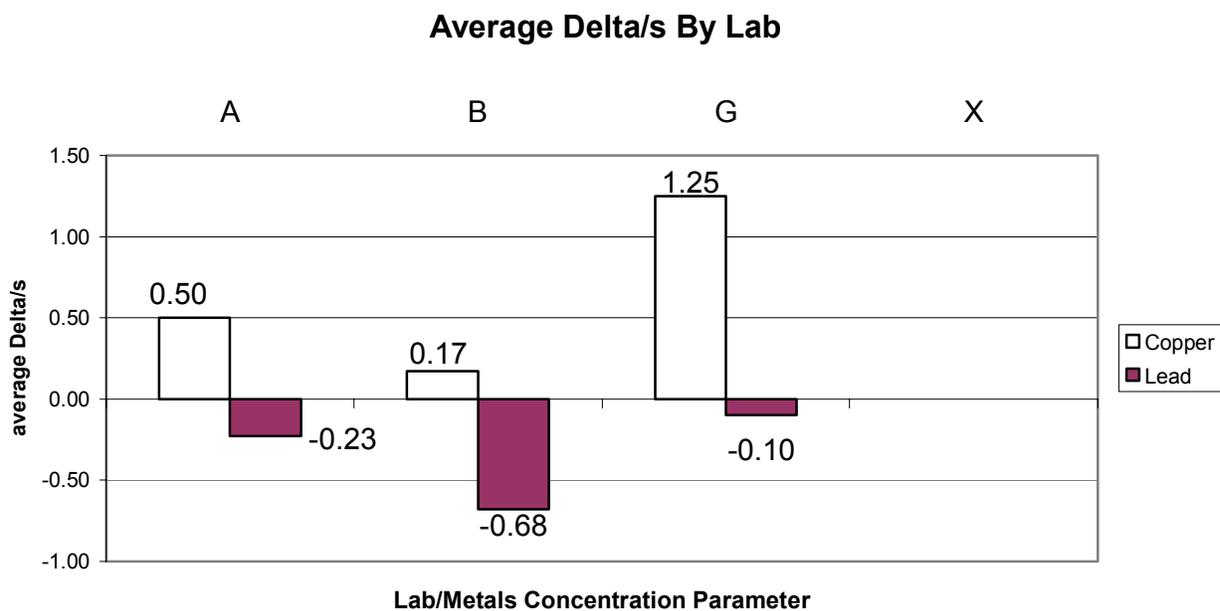
Laboratory Severity and Precision

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



Precision estimates for Copper shows better precision at labs 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	50.3	~1600	45	5+ years

The TMC supply of oil 42 has been exhausted. The TMC has obtained reference oil 44 and will work with the Surveillance Panel to introduce this oil into the HTCBT.

Information Letters and Memorandum

HTCBT Information Letter 05-1, Sequence No. 6 was issued January 7, 2005. This letter dealt with coupon cleaning solvent, evaporation loss measurement and calculation, donated reference oil programs, and the precision estimate.

Hardware

Coupon batch 'E' was approved for use on March 5, 2005.

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/mem05-048.jac.doc

c: HTCBT Surveillance Panel

<ftp://ftp.astmtmc.cmu.edu/docs/bench/htcvt/semiannualreports/htcvt-04-2005.pdf>

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Distribution: Email

Figure 1
HIGH TEMP CBT INDUSTRY OPERATIONALLY VALID DATA

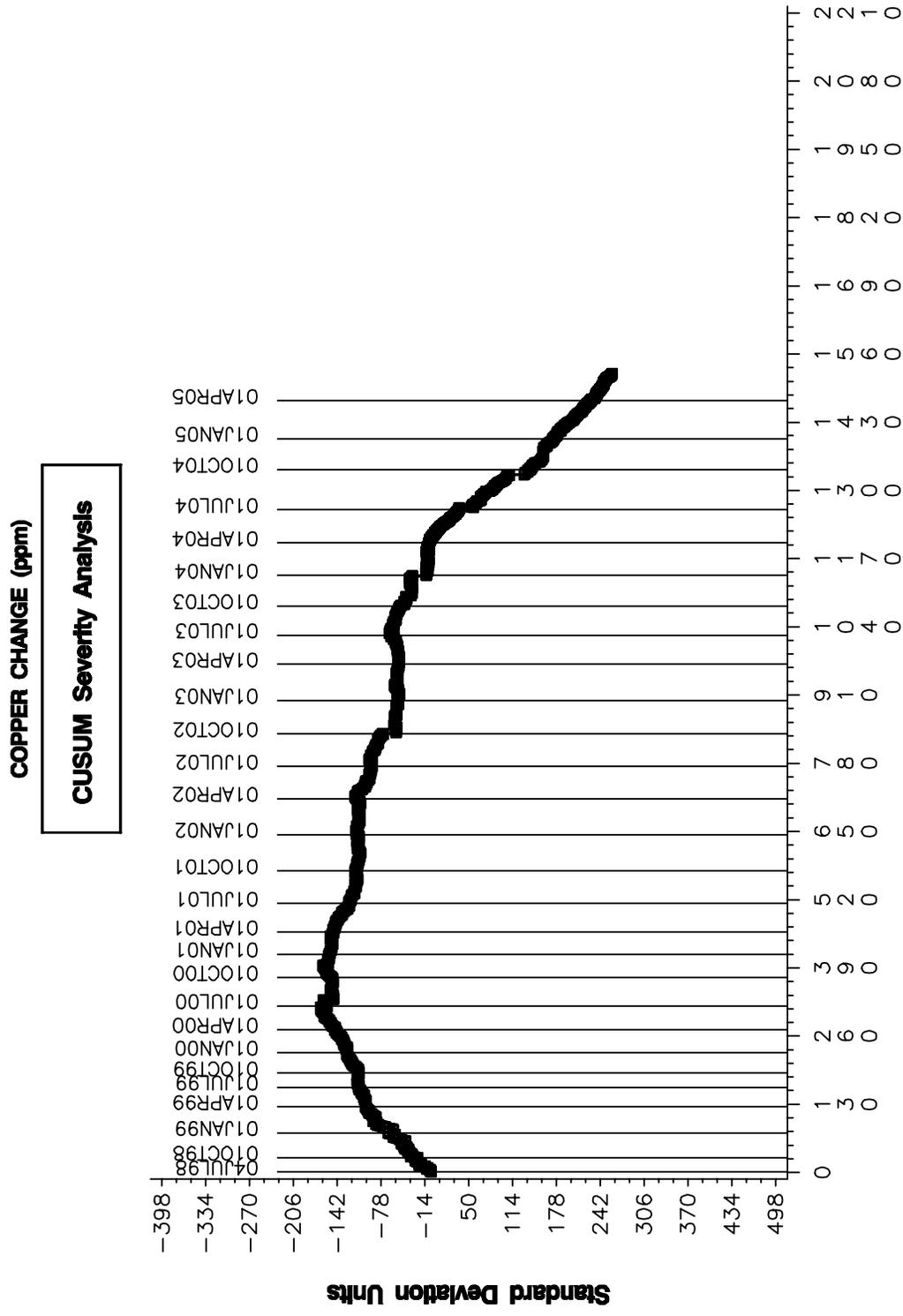


Figure 2
HIGH TEMP CBT INDUSTRY OPERATIONALLY VALID DATA

