A Program of ASTM International

Test Monitoring Center

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412-365-1000

MEMORANDUM: 09-064

DATE: November 30, 2009

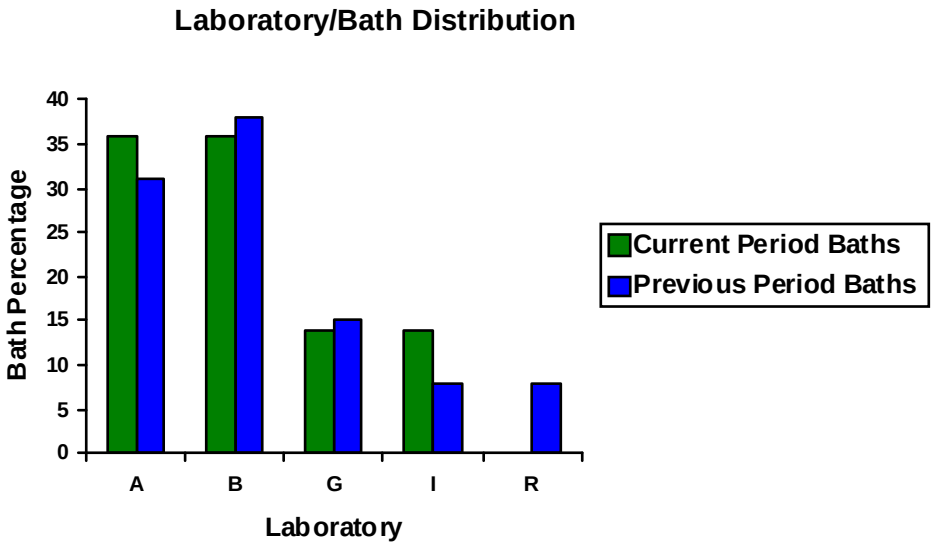
TO: Gil Reinhard, Chairman, HTCBT Surveillance Panel

FROM: Michael T. Kasimirsky

SUBJECT: High Temperature Corrosion Bench Testing for the October 2009 Report Period

A total of 224 High Temperature Corrosion Bench Test results from 14 baths in four labs were reported to the TMC during the October 2009 ASTM report period, which began on April 1, 2009 and ended on September 30, 2009.

The following chart shows the distribution by laboratory.

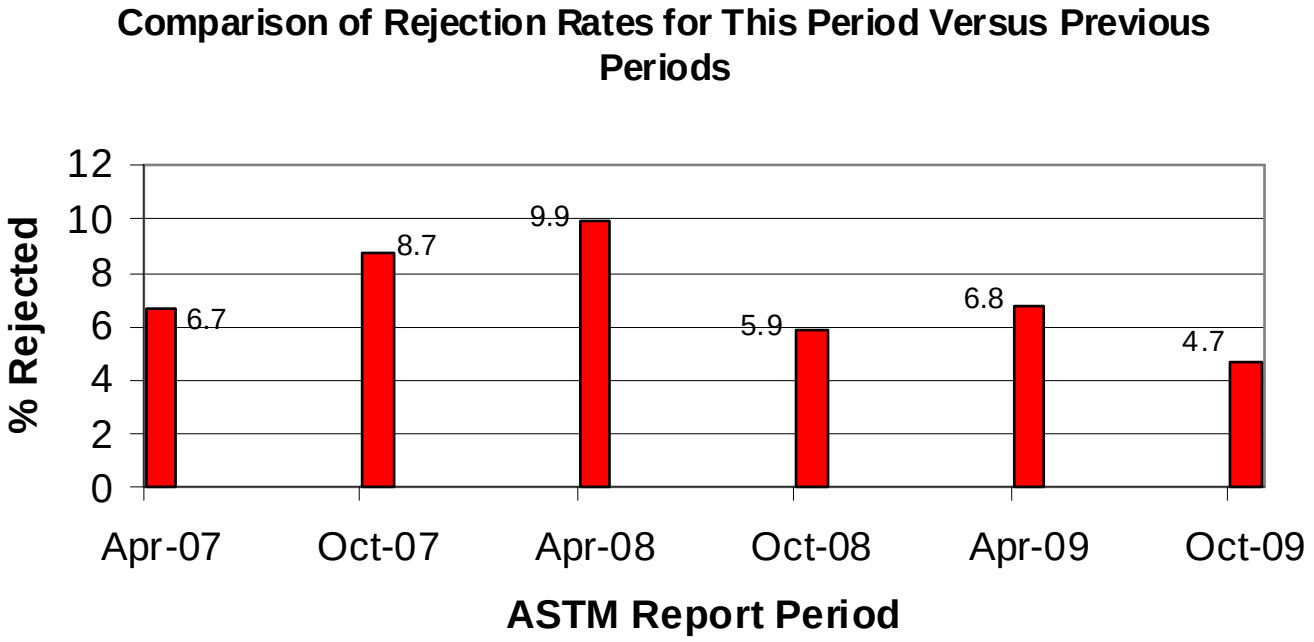


The following summarizes the status of the reference oil tests reported to the TMC:

	TMC Validity Codes	No. of Tests
Operationally and Statistically Acceptable	AC	184
Failed Acceptance Criteria	OC	9
Declared Invalid by Laboratory	LC	1
Aborted	XC	2
Acceptable Industry Support Tests	NI	28
Unacceptable Industry Support Tests	MI	0
Total		224

Tables 1, 2, and 3 (attached) summarize any failed, invalid and aborted tests.

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

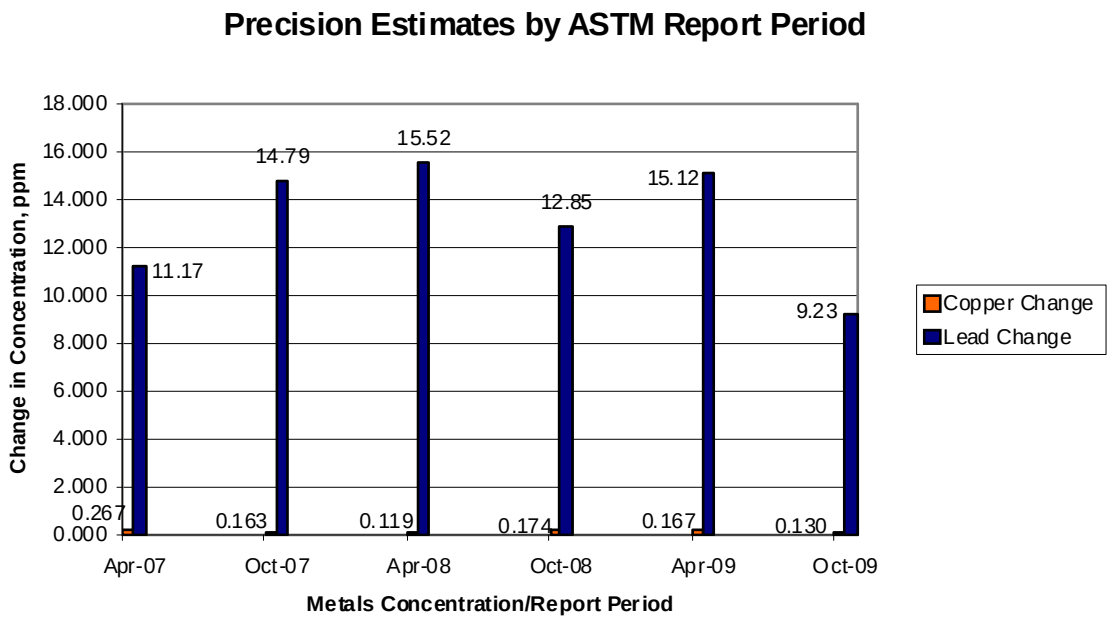


Industry Severity and Precision

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

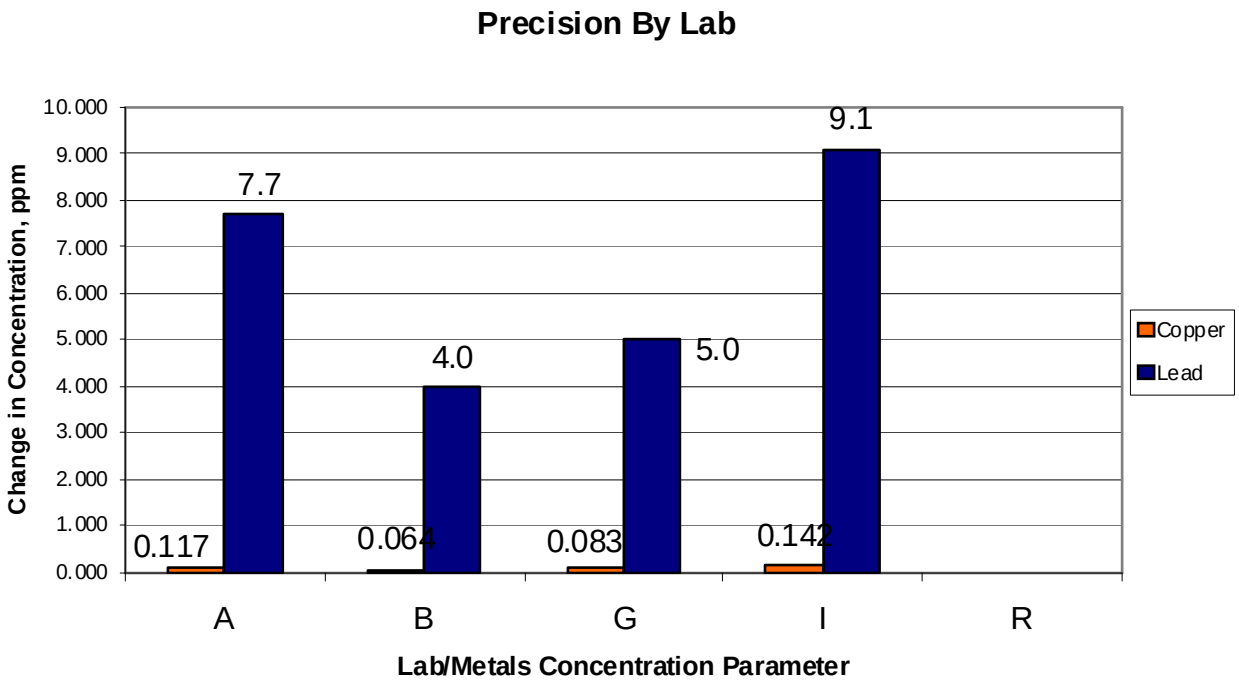
Period	n	Δ Cu Mean Δ/s	Δ Pb Mean Δ/s
4/1/09 through 9/30/09	193	-0.16	0.39
10/1/08 through 3/31/09	220	0.86	0.55
4/1/08 through 9/30/08	179	0.79	0.37
10/1/07 through 3/31/08	172	1.27	0.68
4/1/07 through 9/30/07	173	0.84	0.36
10/1/06 through 3/31/07	176	0.58	0.15

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 mild for the period, reversing a long standing severe trend. No explanation for this change in performance has been found at this time. Figure 2 shows lead change to be severe for the period. Precision estimates, by report period are depicted below. Compared to past periods, the precision for both copper and lead change shows a slight improvement, but it still in line with historical performance.



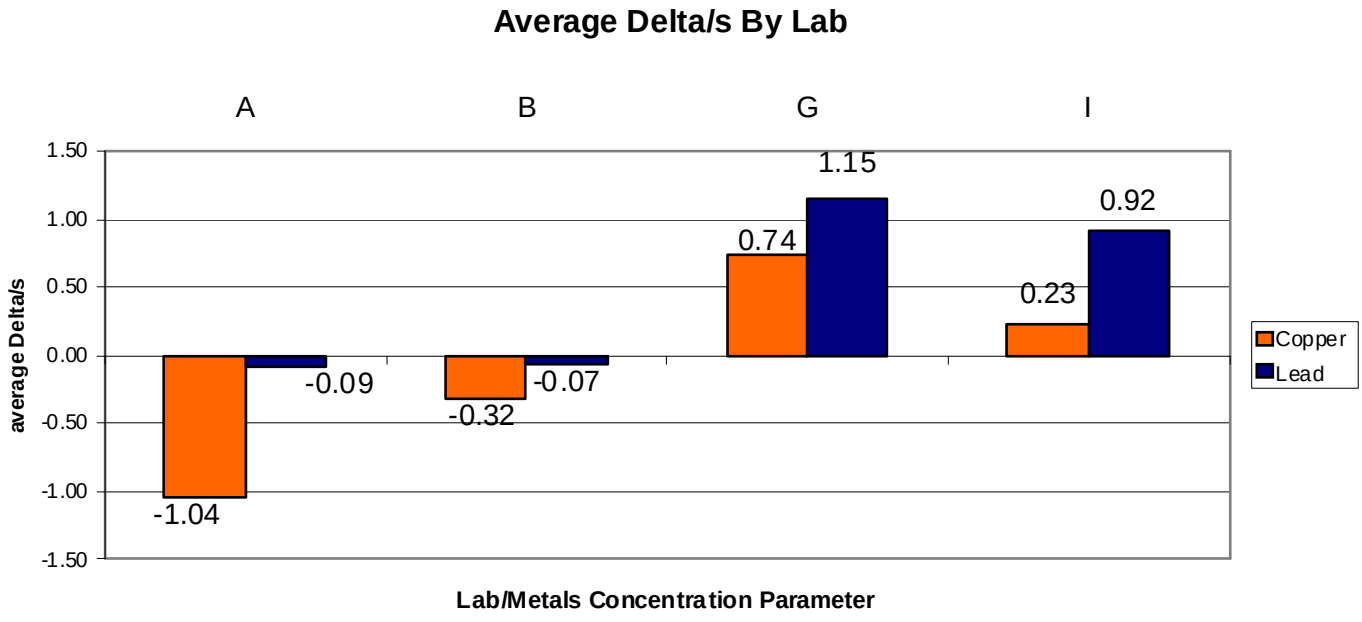
Laboratory Severity and Precision

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



Precision estimates for both Copper and Lead show better precision at Lab B than at any other lab. Lab R submitted no data for the period.

The following plot shows the average Δ/s by laboratory and concentration parameter for this ASTM report period. For Copper and Lead, Lab A was the mildest. Lab G was the most severe for both Copper and Lead.



Reference Oil and Hardware

Reference oil quantities available at the laboratories and TMC, as well as estimated life of these oils, are tabulated below. The TMC is out of oils 44 and 1005. Testing is currently underway to set initial test targets on reference oil 1005-1, but has not been completed at this time.

Oil	TMC Inventory (gallons)	TMC Inventory (tests)	Lab Inventory (tests)	Usage Ratio (%)	Estimated life
1005	0	0	14[#]	N/A	None
1005-1	~3.3	~105	40	~75	~4 months[*]
44	0	0	0	N/A	None
44-1	~4.9	~157	66	~25	~16 months[*]

[#] Twelve of these 14 samples are located at a lab that no longer participates in the HTCBT.
[*] Estimated life of reference oils based upon introduction of oils 44-1 and 1005-1 into system.

On May 5, 2009, the HTCBT Surveillance Panel approved a motion to introduce Reference Oil 44-1 into the calibration system using test targets based upon nine data points. The initial targets are shown below:

Reference Oil 44-1 Initial Test Targets (N=9)			
Parameter	Mean	Standard Deviation	Acceptance Range
Copper Concentration	4.8820	0.1061	107.1 to 162.4
Lead Concentration	41.3	10.3	21.1 to 61.5

These targets were effective on May 5, 2009.

Information Letters

No information letters were issued this 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.

MTK/mtk/mem09-064.mtk.doc

c: CBT Surveillance Panel
ftp://ftp.astmtmc.cmu.edu/docs/bench/htcbt/semiannualreports/htcbt-10-2009.pdf
F. M. Farber
J. A. Clark

Distribution: Email

Table 1
Summary of Reasons for Failed Tests

	No. of Tests
Lead, severe	2
Copper, mild	7

Table 2
Summary of Reasons for Invalid Tests

	No. of Tests
Bath Failure	1

Table 3
Summary of Reasons for Aborted Tests

	No. of Tests
Bath Failure	1
Air Failure	1

Figure 1

HIGH TEMP CBT INDUSTRY OPERATIONALLY VALID DATA

COPPER CHANGE (ppm)

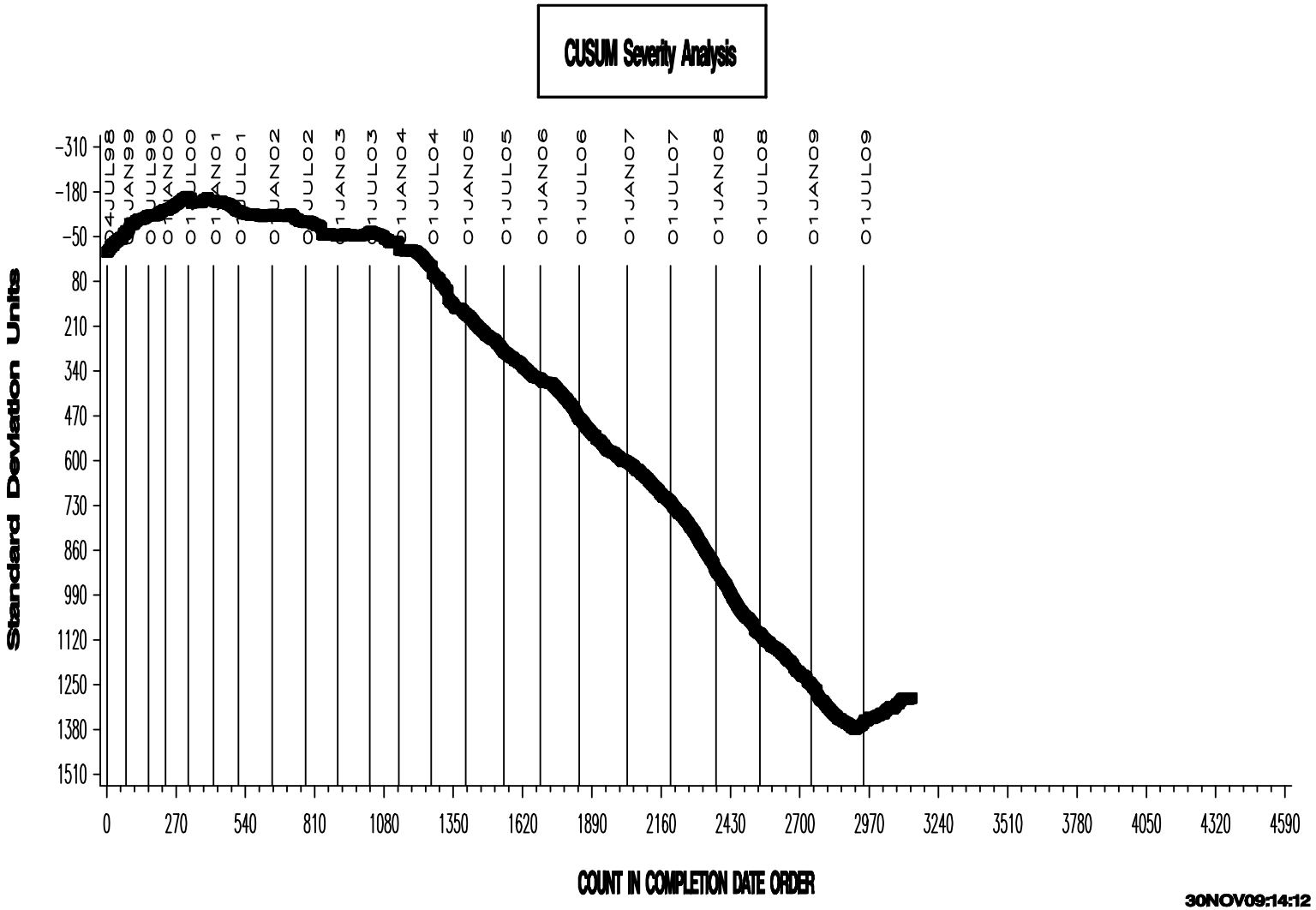


Figure 2

HIGH TEMP CBT INDUSTRY OPERATIONALLY VALID DATA

LEAD CHANGE (ppm)