A Program of ASTM International

Test Monitoring Center

Carnegie Mellon University
6555 Penn Avenue, Pittsburgh, PA 15206, USA

http://astmtmc.cmu.edu
412-365-1000

MEMORANDUM: 09-062

DATE: November 24, 2009

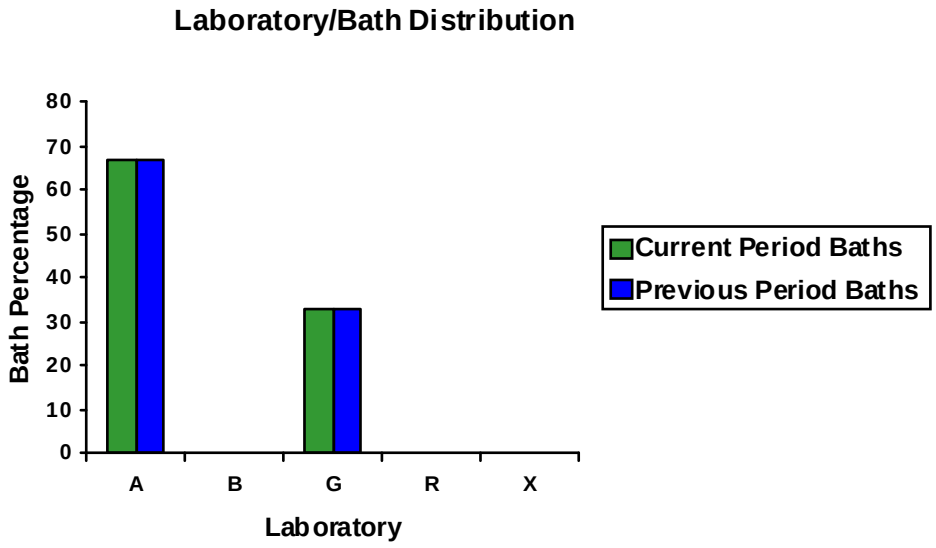
TO: Gil Reinhard, Chairman, CBT Surveillance Panel

FROM: Michael T. Kasimirsky

SUBJECT: Corrosion Bench Test Status for the October 2009 ASTM Report Period

A total of 28 Corrosion Bench Test results from three baths in two 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.

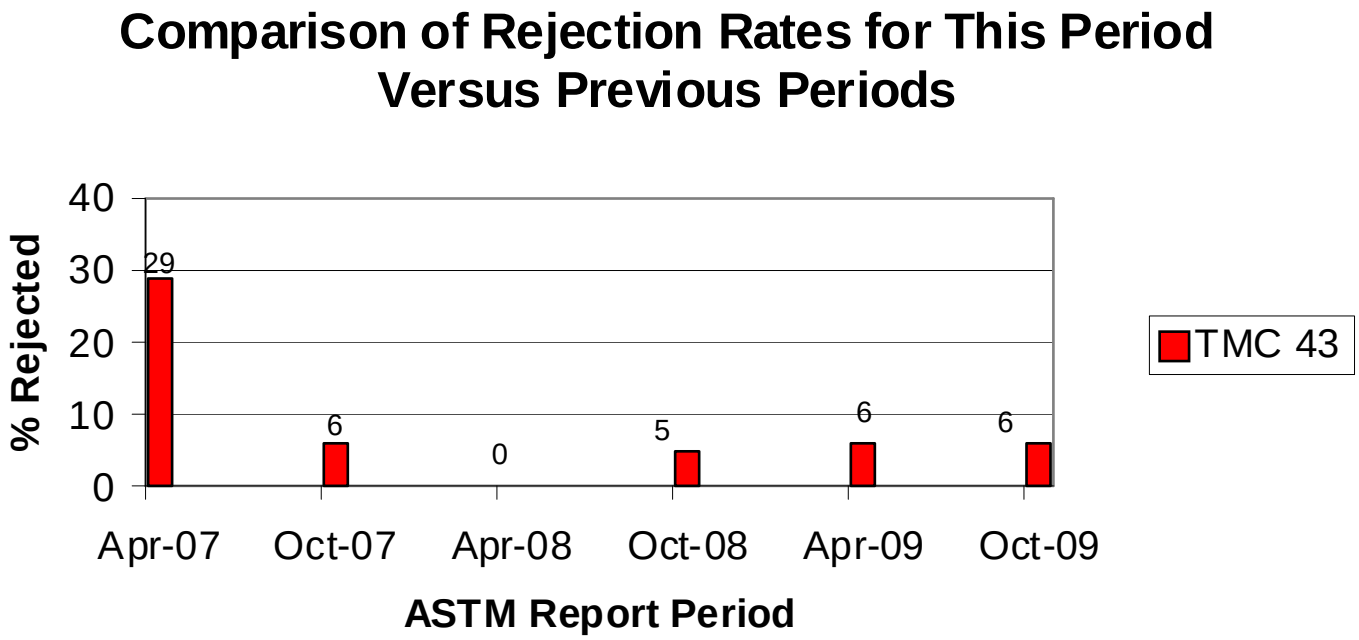


The following summarizes the status of the reference oil tests reported to the TMC:

	TMC Validity Codes	No. of Tests
Operationally and Statistically Acceptable	AC	14
Failed Acceptance Criteria	OC	1
Operationally Invalid	LC, RC	0
Aborted	XC	1
Acceptable Donated Tests	NI	11
Unacceptable Donated Tests	MI	1
Total		28

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.

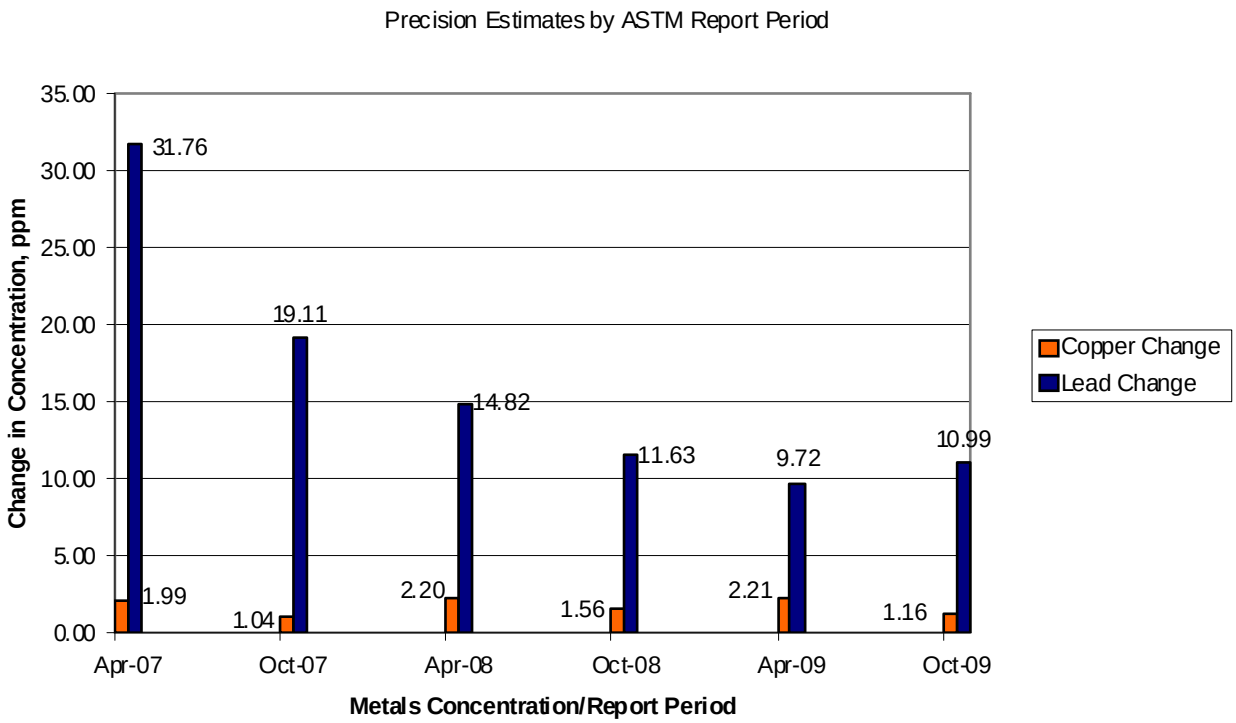


Industry Severity and Precision

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

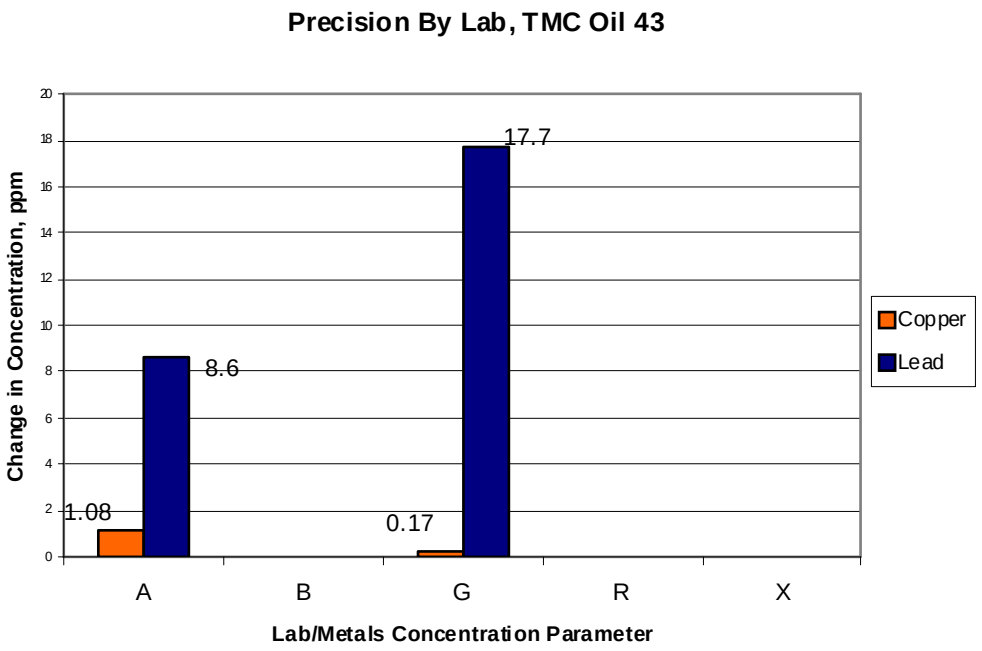
Period	n	Δ Cu Mean Δ/s	Δ Pb Mean Δ/s
4/1/09 through 9/30/09	16	-0.91	-1.20
10/1/08 through 3/31/09	17	-0.83	-0.93
4/1/08 through 9/30/08	20	-0.93	-0.95
10/1/07 through 3/31/08	11	-1.08	-0.58
4/1/07 through 9/30/07	17	-0.79	-0.36
10/1/06 through 3/31/07	29	-1.18	0.02

Figures 1 and 2 (attached) plot the Summation delta/s from target for change in copper and change in lead, respectively. Both copper and lead change are trending mild for the period. Precision estimates, by report period are depicted below. Precision estimates for both Cu and Pb are within historical levels, though in comparison to recent periods, Cu shows some improvement while Pb has degraded slightly.



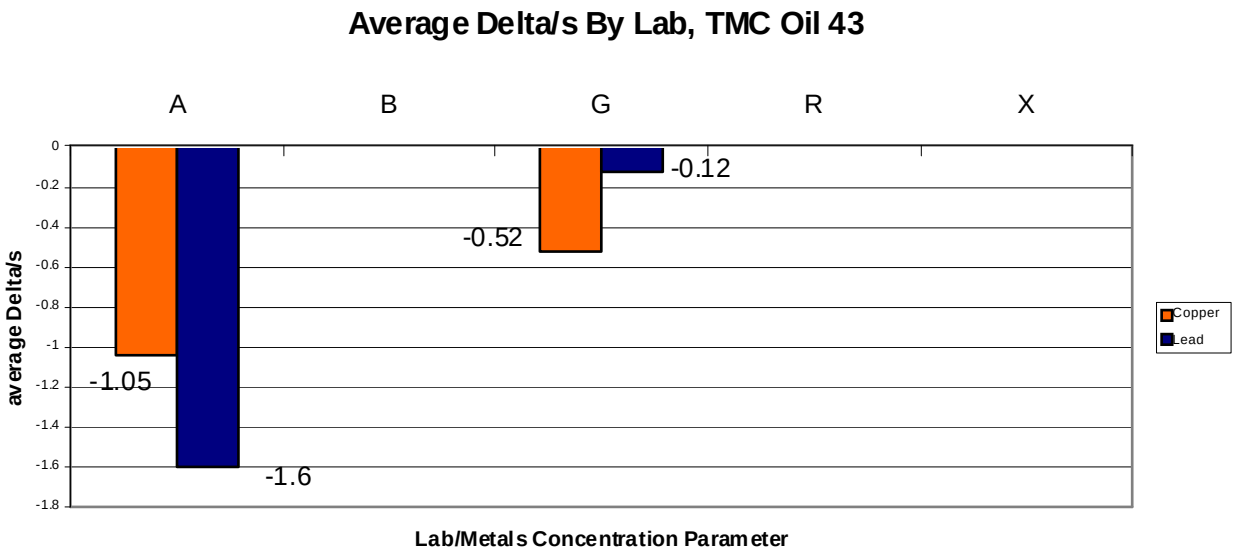
Laboratory Severity and Precision

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



Precision estimates show better precision for Copper at Lab G than Lab A, and better precision for Lead at Lab A than Lab G. Precision estimates are not available for labs B, R, and X (no test activity).

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



For both Copper and Lead, Lab A was mild compared to Lab G.

Reference Oil and Hardware:

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	49.6	~1,444	28	10+ Years

* Test Sample is 130ml

A new batch of test coupons, Batch H, has been approved for use. Reference tests with Batch H coupons will be evaluated with the current test targets until enough tests have been run to reset the targets, if necessary. The current reference oil acceptance bands are shown in the table below.

Oil	Copper Change (ppm)	Lead Change (ppm)
43	12.4 – 24.2	68.5 – 127.3

Information Letters

No Information Letters were issued 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.

MTK/mtk/mem09-062.mtk.doc

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

Distribution: Email

Table 1
Summary of Reasons for Failed Tests

	No. of Tests
Lead, mild	2

Table 2
Summary of Reasons for Invalid Tests

	No. of Tests
No invalid tests	-

Table 3
Summary of Reasons for Aborted Tests

	No. of Tests
Air Failure	1

Figure 1

CBT INDUSTRY OPERATIONALLY VALID DATA

COPPER CHANGE (ppm)

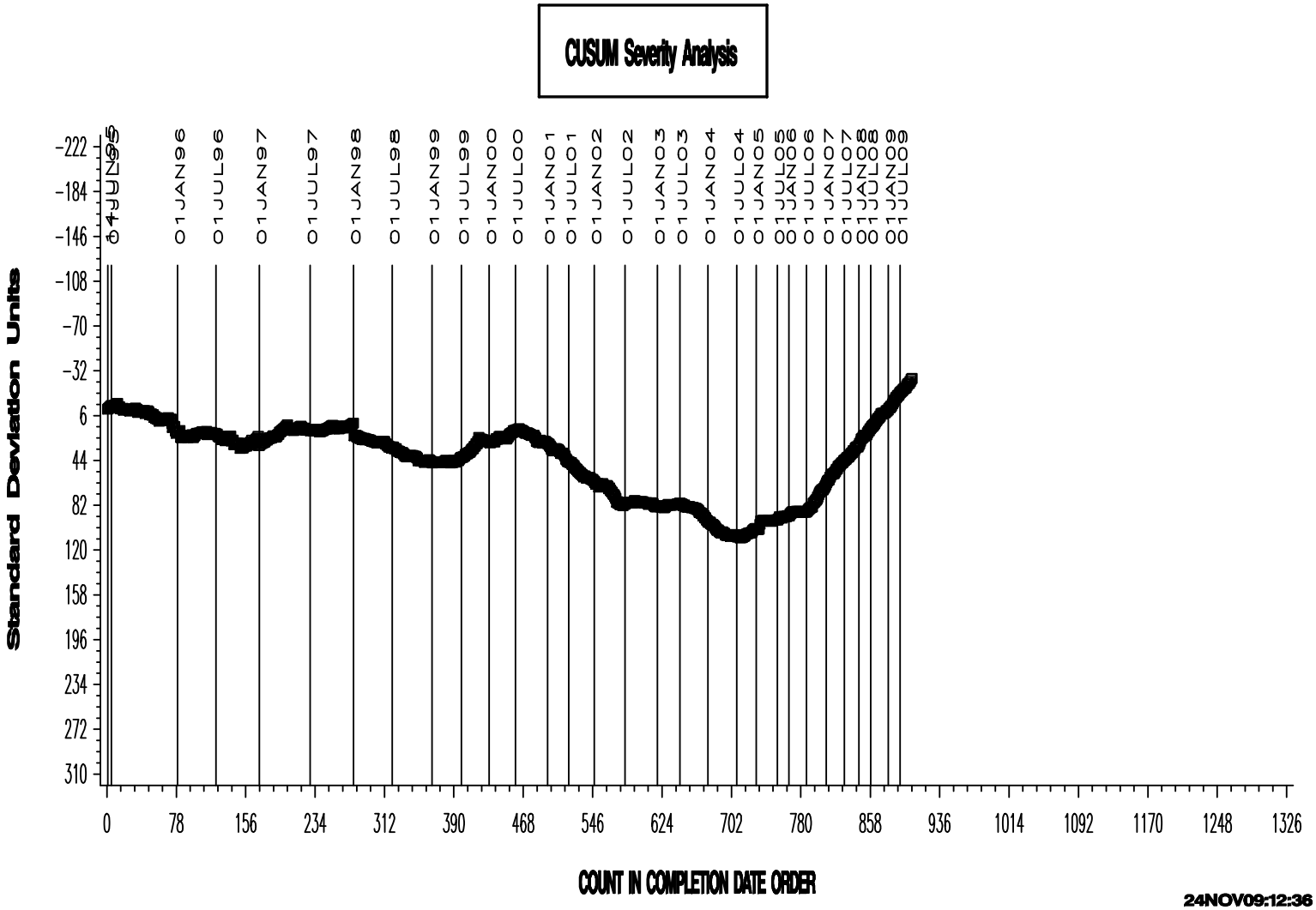


Figure 2

CBT INDUSTRY OPERATIONALLY VALID DATA

LEAD CHANGE (ppm)