

April 13, 1979  
10:15 AM

Melmerandum For: W.C. Seidle

Thru: W.A. Crossman

From R.G. Taylor

Subject: Allegation Number 9, Star - Telegram List.

1. I have examined the lab. cylinder testing machine and its operation. The machine is hydraulically operated. There is a throttle valve on the machine which can be adjusted to give a wide range of loading speeds. A chart currently on the machine gives a setting that will load the cylinder within the 20 to 50 psi/sec. rate required by ASTM C-39 (the unidentified NRC requirement). The machine also has a lever operated valve which bypasses the throttle valve and makes the machine load about five times faster than the above indicated rate. The fast rate is used in the normal operation of the machine to bring the head into contact with the test cylinder and to load the cylinder to about half of the expected breaking strength as allowed by ASTM C-39.
2. The licensee caused an experiment to be made to determine the effect of breaking a cylinder (s) using the fast speed to the breaking point rather the proper way. Eight cylinders were made up on April 5 and cured for seven days and were tested on April 12, in my presence. Four cylinders were broke at the correct speed. These broke at 4210, 4230, 4230 and 4240 respectively. The next four were broke at the maximum speed available and broke at 4670, 4890, 4950 and 4950 respectively. Using averages of each group, properly tested group broke approximately at the 87% point of the fast group.
3. I believe that it would be supportable to establish the ratio between 7 and 28 day strengths in the 76-77 time frame, factor the 7 day breaks by 87% and rearrive at the probable 28 strengtias. Should this number below the 4000 pound require- the licensee would have to justify. If above 4000, we so report and forget the matter.
4. Please comment on the above proposal ASAP and if not in agreement, let me know.

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