



LONOKE, ARKANSAS

MAY 25, 1993

TO: T. C. DOUGLAS

FROM: E. I. HERRING, III *E.I.H.*

SUBJECT: MONTHLY REPORT - MAY, 1993

o 223 Rem 40 JHP - Experimental run completed on May 20 with approximately 3000 rounds loaded. Velocity averaged 3650 ft/s with an average pressure of 48000 psi. (SAAMI spec. 3650 ft/s - 55000 psi max.) Accuracy averaged 0.88 inches extreme spread for 6/8 shot groups at 200 yards. A request has been made to Planning to purchase 900 lbs. of Olin WC-728 Lot #6 for use on the Trial & Pilot run.

o 6.5x55 Swedish - The two UR test barrels which were unsuccessfully rechambered at H-S Precision have been sent to Tim McCormack in the Ilion Custom Shop for rechambering. The Custom Shop reamer is made to the CIP specifications. Have requested the Custom Shop to order a rifling button with an eight inch twist rate in order to supply UR barrels in the future.

o Vihtavuori N-160 Powder - The two samples of N-160 powder have been received and evaluated for velocity and pressure in the 270 Win 130 PSPCL cartridge. N-160 lot 770/92 + 4% + 3% looked best, and was selected as the standard lot for Remington. A charge weight of 58.0 gr gave a velocity of 3025 ft/s with a pressure of 59400 psi. (Spec is 3050 ft/s - 60000 psi) Kaltrone-Pettibone has been supplied with our results and will forward them to Vihtavuori personnel in Finland.

o CBC Magnum Rifle Powder - CBC in Brazil submitted a new sample of a centerfire rifle powder CBC-127 for use in magnum cartridges. Our evaluation showed that this powder is considerably slower than IRR 7828 powder when tested in the 7mm Rem Mag 175 PSPCL cartridge. Test results are listed below:

<u>Powder</u>	<u>Chg.Wt.</u>	<u>Velocity</u>	<u>Pressure</u>
IMR 7828	64.0	2794	58200
CBC-127	64.0	2622	49600
CBC-127	68.0	2726	52700 Full Case

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Although this powder is too slow, these test results indicate that CBC has the capability of increasing the powder speed by reducing the coating level.

- o Lead-Free Buckshot for Law Enforcement - Have contacted Daisy to determine if they can fabricate zinc buckshot in .33" and .24" diameters. Also have received a 100 lb. sample of "F" size .22" diameter shot for evaluation.

- o Flash-Suppressed Shotshell Powders - A request has been made to Hercules for the exclusive rights to shotshell powders which have been flash-suppressed by the addition of FS granules. The addition of FS granules to cannon powders is not new, but they had not been used in shotshell powders until I used them to eliminate muzzle flash in order to photograph the copper solid Sabot slug. Alan Serven a Hercules is looking into our request.

- o The May SAAMI Centerfire Rifle Round Robin tests have been completed and sent to the SAAMI office.

- o Complete review of CIP Technical Manual and forwarded comments to the SAAMI office.