Remington

DUPONT

REMINGTON ARMS COMPANY, Inc.

LONOKE, ARKANSAS

FEBRUARY 24, 1993

TO: T. C. DOUGLAS

FROM: E. I. HERRING, III EIH

SUBJECT: MONTHLY REPORT - FEBRUARY, 1993

o 223 Rem 40 JHP - A sample of Olin WC-728 ball powder was received for evaluation in this load. A charge weight of 27.0 grains gave a velocity of 3637 ft/s with a chamber pressure of 50000 psi (specification 3650 ft/s/55000 psi). Velocity and pressure testing at +150° F and -20° F was satisfactory. Accuracy tests averaged 1.0 inches extreme spread for 3/5 shot groups at 200 yards! An order has been placed with Sierra for 10000 bullets, and one 35 pound drum of WC-728 powder has been ordered from Olin for the experimental run.

o SCOT Red Diamond Shotshell Powder - A sample of SCOT Red Diamond powder was submitted for evaluation in our GL12 promotional shotshell. This powder imported by SCOT Powder Company from Czechoslovakia has a unique square flake and is manufactured by extruding a thin ribbon of powder and cutting it into square flakes. A charge weight of 18.7 grains gave excellent ballistic performance, 1289 ft/s - 9900 psi (spec. 1290 ft/s 9500 - 11500 psi). Velocity and pressure at +150° F and -20° F was very good. If the flow characteristics of this powder are satisfactory, it could be considered as an alternate powder for this shell.

o Bismuth Shot - At the SHOT Show, the Bismuth Cartridge Company was promoting shotshells loaded with bismuth shot. We purchased several boxes for evaluation. The ambient velocity and pressure of this load was excellent with a velocity of 1329 ft/s and a pressure of 10100 psi (spec. 1330 ft/s - 9500 - 11500 psi). The pattern performance, however, was not with patterns averaging only 55%. The bismuth pellets were slightly egg-shaped which is not conducive to good pattern performance.

o Instruction Letters have been issued for steel shot weight control specs. and the PR12-RS Sabot slug.

o 20 ga. 2 3/4" rifled slug test barrels have been received from H-S Precision with twist rates of one turn in 24" and one turn in 35".

o An interim propellant powder specification for Vihtavuori N-160 rifle powder has been drafted and sent to Kaltrone-Pettibone for transmittal to Finland.

o 6.5x55 Swedish Mauser - Still no resolution on which drawing will become the "official" SAAMI drawing. Federal announced the 6.5x55 at the SAAMI meeting in January and indicated they were going to submit the CIP drawing as the official SAAMI drawing. While testing their first production run of ammo made to CIP specs, they encountered difficulty in chambering their product in the USRAC M-70 Winchester rifles with the SAAMI chamber. The bolt was difficult to close and shaved slivers of brass from the head of the shell. Federal has now made an experimental run of product made to the SAAMI drawing and are currently running tests. They indicated that they may issue a third drawing, but the SAAMI office is against this move. The official 6.5x55 drawing in SAAMI will either remain as is or be changed to CIP. No additional variations! Ruger plans to chamber their M-77 rifle for the 6.5x55 in midyear, but are currently experiencing accuracy problems using the SAAMI chamber. They indicated they would be receptive to using the CIP chamber. The big problem right now is the fact USRAC has made a good number of M-70 rifles using the SAAMI chamber, and they would not be very happy if the CIP chamber is adopted. What a mess!

o On 2/17/93, representatives from Olin Powder visited the plant to discuss our usage of ball powder. During their visit, they revealed to us an Olin proprietary concept of In-Case Compaction Technology. This process involves compacting ball powder into a cartridge case to improve the performance of existing gun systems. This technique has been utilized for some time in military medium caliber guns from 50 caliber to 30mm, and is now being applied to small arms. If indeed this technology can be adapted to small arms, it could have a major impact on the centerfire and perhaps the shotshell ammunition business.

o New Concept Shotgun - Contacted Winchester to determine if they had empirical data to validate the SAAMI exterior ballistics data for steel and lead shot using their doppler radar system. They indicated no work had been done in this area.