**REMINGTON ARMS COMPANY, INC.** 

INTER-DEPARTMENTAL CORRESPONDENCE

Reminston MMD

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Ilion, New York November 27, 1984

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W.H. COLEMAN, II

MONTHLY PROGRESS REPORT NOVEMBER 1984 NEW PRODUCTS - AMMUNITION

# "PREMIER" SHOTSHELL

## - 12 Ga. 3" 1 7/8 oz.

Screening experiments are underway on the two piece (SP) and rotary cam (RC) large volume bodies. Several handload configurations have been identified in the RCLV which give acceptable ballistics in short and long term (5 days) environmental testing.

A new Hercules powder is indicating particularly encouraging results when used in either the standard "plant" load configuration (RCLV, SMAG PP and Gulf filler) or in a more "forgiving" configuration (RCLV, RP12PP and USI Microthene filler). A 100 lb. sample has been ordered with delivery expected by mid-December for a trial run on plant loading equipment.

An existing Expro powder is also indicating encouraging results. A 35 lb. sample is in Lonoke.

The Production loader is now available. Plans are to check loader uniformity and begin experimental loading as powders and primed bodies (F209) become available.

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### "PREMIER" SHOTSHELL

-20 Ga. 3"  $1 \frac{1}{4}$ 

Load development has shown promising results using several powders in short and long term environmental testing. These loads used standard wads, the RC body and USI Microthene. Additional tests are being conducted using Gulf filler.

- Powder Growth at -20F

Powder fracturing has been observed in both fast and slow powders recovered at ambient and -20F. However, pressure growth was only observed in the stiff load configuration regardless of the powder used. We, therefore, believe powder fracturing has little effect on shotshell ballistics.

#### REMINGTON TARGET LOAD

An economic analysis of Remington target loads using the RTL wad in 12 Ga. shows an unfavorable return due to the mold investment and increased working capital. Representatives of the Ammunition Business Team made a recommendation to proceed with the project citing the overall best interest of the company would be comprised without RTL. Research and Process Engineering intend to work with Osley and Whitney on the design and development of the first factory RTL wad mold.

Scale up of the component wad from the research single mold to the AIM 24 cavity mold has been unsuccessful to date due to higher than anticipated cycle time to obtain acceptable product quality. Research and Process Engineering will meet this week to determine what action is to be taken.

# "PREMIER" CENTERFIRE

Thin mouth .30 caliber jacket draw punches were shipped to EDL. Nose cut dies for .30 caliber bullets are being fabricated in the model shop. The jackets annealled to three different temperatures and nose cut dies are expected to be ready in early January.

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# To: W.H. Coleman, II

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# "PREMIER" CENTERFIRE

A plant run was conducted using three candidate solutions to chemically polish centerfire brass cases. Chemical cost, waste treatment, metal removal and the case finish appear acceptable and in line with initial goals. ETL is preparing a test summary to be issued in early December.

W.L. Tomek Research Supervisor New Products - Ammunition

WLT: js