Remington Arms Co., Inc.
Lonoke, Arkansas

To: T.C. Douglas

From: J.M. Kostrubanic JMK

SUBJECT: September Progress Report - 1992

LABORATORY EQUIPMENT:

Since the previous report, three new pieces of equipment have been added to the metallurgical lab; a LECO hand grinder, a sample storage cabinet, and a Wilson microhardness tester. The microhardness tester replaced a worn out unit that was nearly thirty years old. All three of these components greatly update the lab and improve efficiency of daily metallurgical operations.

GENERAL:

In addition to day to day projects, some of the more larger projects include:

8 GA. Gun Barrels -
Two 8 GA gun barrels were examined that failed due to severe erosion of the inner sleeve just in front of the shell. The study revealed an overly soft liner and an out of specification material for what the current drawings call for.

149 Primer Cups -
Related to the issue of obtaining better sensitivity from 149 primer cups, two lots of cups were examined looking for a difference in mechanical or material properties.

Heading Dies -
Several D3750 heading dies failed prematurely due to cracking of the inner carbide insert. Several of these dies were examined looking for a possible material defect. As a result, the vendor and carbide manufacturer were contacted.

Cupping Punches -
Several centerfire cupping punches were found to have failed due to erosion of the working surface. Current material specification for this punch is W1 tool steel which has a relatively low abrasion resistance. New punches of more wear resistant A2 tool steel were recommended with the goal of improving punch life span.

.22 Rimfire Bullet Forming Punches -
These punches were brought to my attention in hopes of improving punch life span. The current material for these punches is M2 tool steel.