

CONFIDENTIAL

7/2/93

To: T.C. Douglas

From: J.H. Coyle *JH*

Subject: Monthly Report

LEADLESS BULLET (COPPER):

Another sample of 270 bullets has to be machined so additional velocity and pressure testing can be conducted. This will be done as soon as there is a break in the machining of the magnum slug and sabot. This should be done by 7/15/93.

Some 30 cal bullets will also be machined and various cavity diameters will be investigated.

A summary of the copper bullet development along with vendor information and ballistics testing are attached to this report.

LEAD FREE P&R TRAINING AMMO:

The two 62A machines that were reportedly sold were back on the market and a P.O. has been issued for their purchase. R. Garrison, the maintenance supervisor, went to inspect the machines before purchased. The machines should be on site by 7/16/93. The machines will require guarding and rewiring and thorough inspection which is estimated to take approximately 8 to 12 weeks after arrival on site. The machines should be ready for service by 10/15/93.

Tooling for the copper discs has been fabricated and 3 samples of approximately 1500 each have been made on the gas check machine with no problems. A disc drawing will be made and sent of for quotes for a feed system that can be installed on one of the purchased 62A machines. The quote should go out by 7/9/93.

Drop test results indicate that the Flocchi leadless primers are less sensitive than current primers. There was one misfire on large pistol primers. This test is being repeated to gain additional information. V/P and accuracy was essentially the same as Remington product using the same charge weight. Regular metal case bullets were used in this handload test. The results of the handloading test are listed below:

	Velocity	Pressure	Accuracy
45 ACP 230 MC (F)	829 fps	18200 psi	2.0" @ 50 yds
45 ACP 230 MC (R)	825 "	17800 "	2.1" @ "
40 S&W 180 MC (F)	965 fps	30800 psi	1.7" @ 25 yds
40 S&W 180 MC (R)	987 "	32800 "	1.8" @ "
38 Spl 130 MC (F)	950 fps	14100 psi	1.5" @ 50 yds
38 Spl 130 MC (R)	967 "	14400 "	1.6" @ "
9mm 124 MC (F)	1105 fps	31700 psi	1.8" @ 25 yds
9mm 124 MC (R)	1122 "	33000 "	1.5" @ 25 yds

A quantity of ammo will be loaded and field-tested in several different handguns to gain additional information about the leadless primer. This should be done by 7/21/93.

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