

TO: K.W. SOUCY  
FROM: T.C. DOUGLAS

SEPTEMBER 29, 1992

SUBJ: PREMIER SLUG PROGRAM STATUS

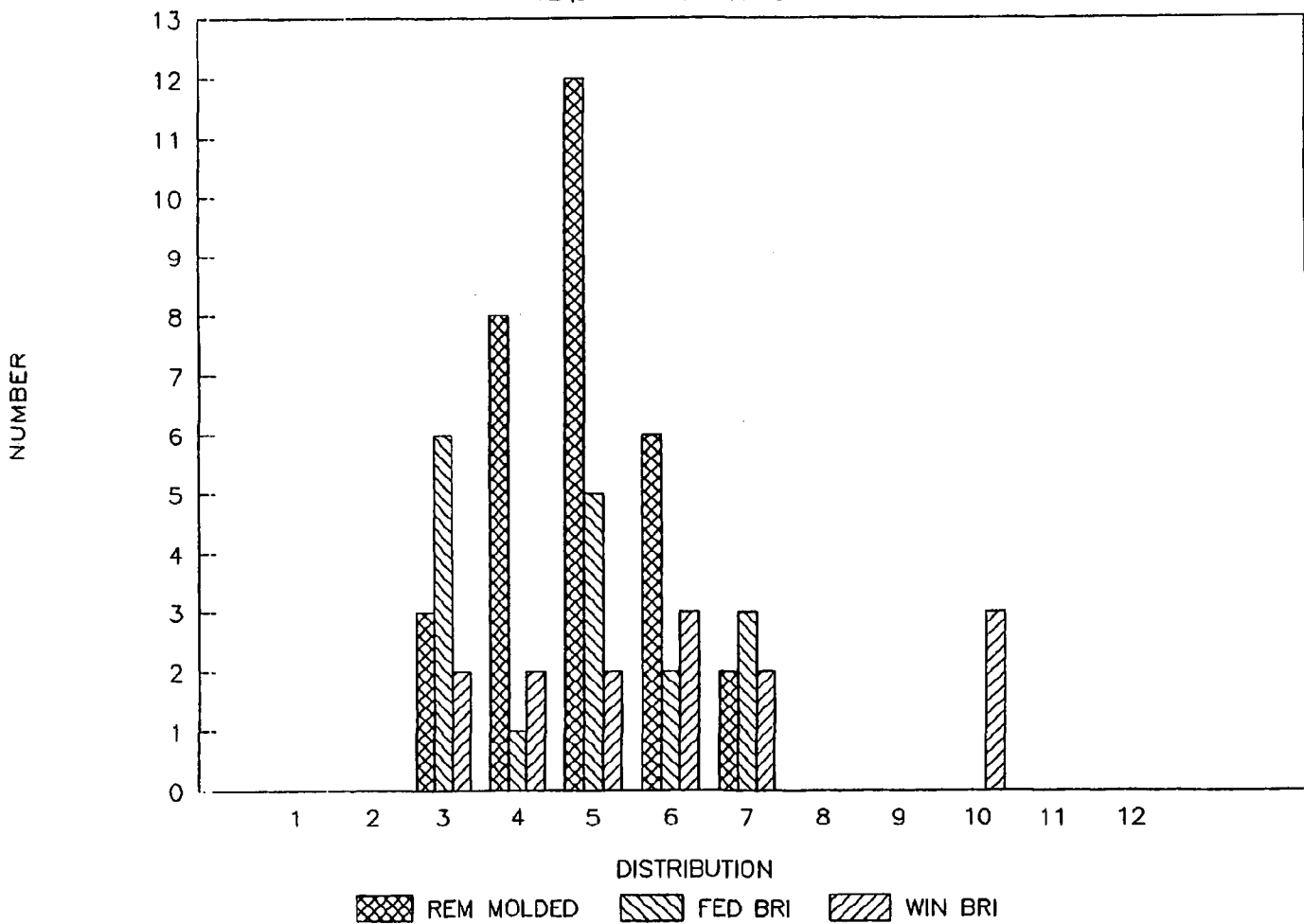
- o TWO SEPARATE, SMALL QUANTITY (150 PIECE) MOLDED SABOT SAMPLES AVERAGED LESS THAN 3.5 INCH GROUPS FOR 17 FIVE SHOT GROUPS.
- o A FULL SHIFT RUN MOLDED SAMPLE (>1000 PIECES) AVERAGE 4.5 INCHES (30 GROUPS) THROUGH COMPOSITE TESTING IN 4 DIFFERENT COLLARED TEST BARRELS (SEE ATTACHMENT 1).
  - FEDERAL AVERAGED 4.4 INCHES (17 GROUPS) AND WINCHESTER AVERAGED 6.0 INCHES (14 GROUPS).

NOTE: THE INTERNAL ACCURACY GOAL THROUGHOUT THIS PROGRAM HAS BEEN APPROXIMATELY 3.5 INCHES. THIS ARBITRARY NUMBER WAS CHOSEN DUE TO THE FACT THAT THESE LOADS ARE LABORATORY HANDLOADS AND THAT ALL THE FACTORS IN THE "PRODUCTION EQUATION" COULD ADD ANOTHER 1 INCH TO THE GROUP SIZES, GIVING US A 4.5 INCH LOADING VERSUS A SAAMI SPECIFICATION OF 5.0 INCHES.

- WE ARE CURRENTLY ADDRESSING SEVERAL DIMENSIONAL ISSUES, WHICH MAY OR MAY NOT HAVE A BEARING ON THE ACCURACY ISSUE. ADDITIONALLY, LARGER OD (.745") MOLDED SAMPLES ARE EXPECTED BY 9/30 FOR TESTING.
- HANDLOAD TESTING WITH AN INTENTIONAL 2 GRAIN POWDER WEIGHT VARIATION TO SIMULATE THE LOADER YIELDS NO DEGRADATION OF ACCURACY. PLANS ARE BEING MADE TO RUN A SMALL EXPERIMENTAL RUN ON THE LOADER USING HAND-FED COMPONENTS TO GET A BETTER IDEA WHAT WILL HAPPEN ON THE LOADER.
- THE THREE HOPPERS NEEDED TO MACHINE LOAD THIS PRODUCT ARE ON ORDER WITH AN EARLY NOVEMBER DELIVERY. IT IS ASSUMED THAT EX AND T&P QUANTITIES OF SABOTS WILL BE RUN ON THE SINGLE CAVITY EX MOLD. THE PRODUCTION SABOT MOLD WILL NOT BE ORDERED UNTIL WE ARE SATISFIED WITH THE FINAL PRODUCT.
- o LOADED AMMUNITION MADE WITH THE FULL SHIFT PRODUCTION MOLDED SABOTS WAS SENT TO ILION FOR SHOULDER FIRED 100 YARD TESTING. MACHINED SABOT AMMUNITION AS WELL AS FEDERAL AND WINCHESTER BR1 PRODUCT WAS ALSO TESTED. THE MACHINED SABOT TIED WITH THE FEDERAL PRODUCT FOR FIRST PLACE FOLLOWED BY THE WINCHESTER PRODUCT, WITH THE MOLDED PRODUCT BEING LAST (SEE ATTACHMENT 2).
  - COMPARING ATTACHMENT 1 DATA TO ATTACHMENT 2 DATA SHOWS THAT THE FEDERAL AND WINCHESTER AVERAGES INCREASED APPROXIMATELY .6 INCH DURING THE ILION TEST. THE MOLDED SABOT AVERAGES INCREASED APPROXIMATELY 3 INCHES.
  - THE VOLUME OF GROUPS IN THE LONOKE DATA VERSUS THE ILION DATA MAKES THE LONOKE DATA MORE CREDIBLE; HOWEVER, THE ILION DATA CANNOT BE IGNORED. THREE FULLY-RIFLED 870 SLUG BARRELS HAVE BEEN RECEIVED FROM ILION AND ARE BEING COLLARED UP FOR A LARGER ILION BARREL TEST. THE QUESTION BEING: DOES THE TEST DATA MORE CLOSELY MIMIC PREVIOUS UP TEST BARREL DATA OR THE ILION RUN DATA?

# LONOKE UR BARREL TESTING (4 BBLs)

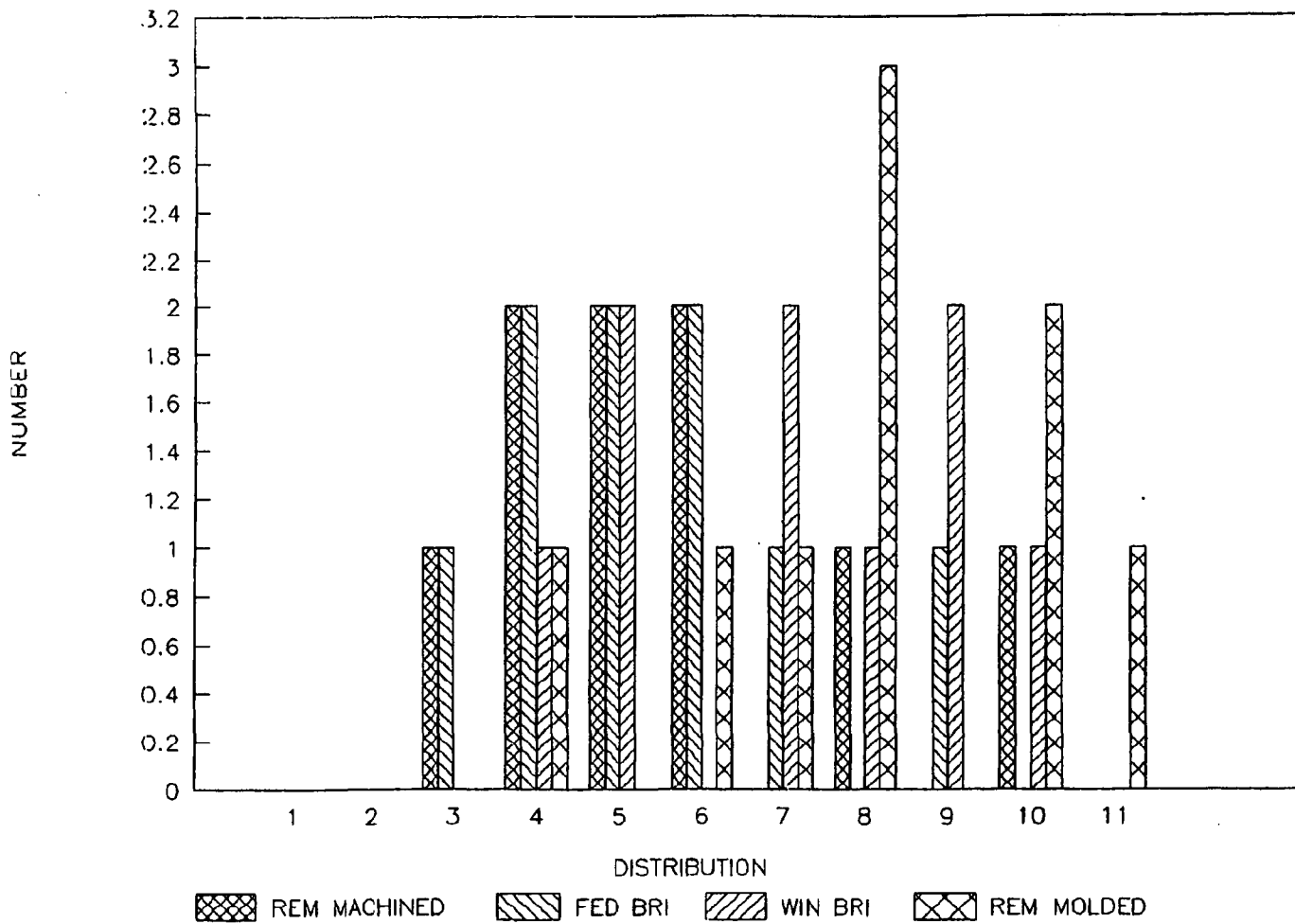
FIVE SHOT AVE DISTRIBUTIONS



(ATTACHMENT 1)

# ILION GUN TEST 9/92

.FIVE SHOT AVE DISTRIBUTIONS



(ATTACHMENT 2)