Summary of Progress from Inception:

The various approximate calculational methods in the literature have been reviewed and a procedure used by Langweiler has been used for making experimental calculations.

This Quarter's Work:

The Langweiler technique is being simplified and a technique for powder measurement similar to that used by Frankford Arsenal is being tested. Data are being taken on shot shell powders.

Proposed Next Quarter's Work:

The above phases of the work will be completed in approximately four or five months on the present schedule.

Project: Primer Sensitivity for Fire Control Design - TP-3388 Personnel: M. W. Maughan, T. Stewart Authorized Amount: \$4,250 Total Expended to Date: \$1,539

Nature of Problem:

This project proposes to obtain data on primers and provide a simple method for specifying and measuring the firing pin blow for firing mechanisms designed at Ilion.

This Quarter's Work:

Run-down curves on .30/06 primed cases using four different ball weights have been taken. The data seem to indicate that a satisfactory statement can be made as to how fast a given striker should move in guns firing the .30/06 cartridge.

Proposed Next Quarter's Work:

Similar data will be obtained on other cartridges during the next Quarter. Efforts will also be made to obtain a correlation of the striker energy necessary for primer firing with amount of indent in a copper crusher or to obtain similar means of mechanically indicating striker energy. Some effort has already been spent on this but good correlation has not yet been obtained.

Primer Setback Autoloading Means - TP-3389 Personnel: T. Stewart

Authorized Amount: \$7,200 Total Expended to Date: \$5,067

Nature of Problem:

An inventor, H. R. Clarke, demonstrated to us a caliber .30 carbine utilizing an action unlocking on primer setback and actuated by blow back. This has been carefully examined with a view to using his principles on other cartridges.

Summary of Progress from Inception: It was found that any center fire cartridge would