



US Army Engineering & Support Center
Huntsville, Alabama

Ordnance & Explosives Innovative Technology Program

PROJECT: Black Powder Filled Munitions Fragmentation Study

TEAM MEMBER: DuPont

PROJECT DESCRIPTION: This project is to test the fragmentation of black powder filled munitions. Black powder munitions are frequently found on military munitions response sites and the team member is currently involved in a response at a commercial site involving black powder munitions. Equations developed to predict the fragmentation characteristics of high explosive filled munitions do not accurately predict the fragmentation characteristics of black powder filled munitions. Fragmentation characteristics are used to determine exclusion zones and design engineering controls.



Arena Test Setup

A variety of black powder filled munitions were detonated and fragment sizes and velocities recorded.

POTENTIAL TECHNOLOGY APPLICATIONS: Fragment sizes and velocities were captured enabling better prediction of fragment throw distances and fragment penetration capabilities.

FUTURE WORK: Completed FY 05.

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