

## **COMPARISONS OF MEASURED DATA AND CALCULATION RESULTS FROM RECENT TUNNEL AIRBLAST EXPERIMENTS**

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A series of airblast experiments were conducted in the main tunnel of an underground ammunition storage facility. Charge masses of 45.4, 90.8, 180.6, and 500 kg were detonated at 7 m from the end of a 2.5-m-wide by 2.5-m-high by 83-m-long tunnel. Seven airblast mounts were installed on the tunnel wall to measure side-on and total pressures. These overpressure measurements were made with the WES-designed probe mount with the gage location in the tunnel, 76 mm from the tunnel wall.

The experiments were simulated using computational models. An engineering model was developed using BLASTX<sup>[1]</sup>, a WES PC-based airblast prediction code. Other computational models were developed using a hydrodynamic, first-principles airblast codes (SHAMRC, RAGE<sup>[4]</sup>, and CTH<sup>[2,3]</sup>) run on a mainframe computer. This paper compares the measured data to the results of the computer simulations.