LARGE SCALE HE FREE FIELD SIMULATION

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S-cubed conducted a series of 2D computer simulations using the HULL code. A discussion of the 2D detonation calculation which simulated 4800 T of ANFO and the hemispherical container is presented. Because of the size of the charge, the loading density of the ANFO varied vertically from 0.9 g/cc at the bottom of the charge to 0.8 g/cc at the top. Based on the results from a previous event the equation-of-state for ANFO was modified to produce the higher detonation velocities appropriate for large ANFO charges. The fiberglass container for the detonation calculation was modeled using heavy air. A second calculation simulates the free field environment to 1.8 s. This calculation along with the available free field data, was used to determine the effective yield obtained from the charge.
A discussion of the effective airblast yield has also been included.