354.2(PLUMBBOB)OO
MEDNE

Thermal Radiation Effects in Nuclear Weapons Testing

The Quartermaster General
Attn: Chf, R&E Division
Rm 2011, Tempo B

TSG, DA

Colonel Maupin/65957

1. Reference is made to the Second Quarterly briefing for the Chief of Research and Development, Department of the Army, particularly with respect to the medical portion thereof involving results of Project 4.1, Operation Plumbbob.

2. Misunderstanding or misinterpretation of statements made with respect to relative importance of thermal casualties and nuclear radiation casualties has arisen out of confusing dominant injury with total casualty load.

3. This office does not mean to infer that thermal casualties are not important nor that they will not contribute materially to the casualty load.

4. Three items are significant in considering the importance of thermal radiation:

a. Concomitant burns decrease the resistance of the individual to irradiation.

b. In all size weapons, there will be a considerable portion of potential burn casualties outside the lethal range of nuclear radiation.

c. The ratio of the area of thermal effect to radiation effect increases as the yield increases.

5. Therefore, in consideration of the above, the Surgeon General is vitally interested in developments in operational or material disciplines which will reduce the number of burn casualties as well as other weapon effects.

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