11. BOMB, BIOLOGICAL, 750-lb., E86R1

The E86 type bomb, figure 13, is an anticrop munition for disseminating TXI from high performance aircraft. It is a successor to the E73R1 500-lb. Biological Bomb, figure 14.* The E86R1 consists of an E53 750-lb cluster adapter into which are placed 7 cylindrical agent containers each loaded with about 2½ lbs of feathers and anticrop pathogen. Insulation and other means for controlling the temperature of the fill are incorporated in the bomb to preserve agent viability. After release from the aircraft, the bomb falls for a predetermined time and is opened. The agent containers then fall free and decelerate to terminal velocity, after which the containers are opened and the fill released.

The E86 bomb is an earlier model which resembles the E86R1 but uses an E48R2 cluster adapter, rather than the E53 type adapter. Both the E86 and the E86R1 bombs overcome the major deficiencies of the original E73R1 munition, i.e., unsatisfactory release from high-performance aircraft and lack of temperature control to preserve viability of the agent.

The Ralph M. Parsons Co. is developing the E86R1 as one of its tasks under contract DA-18-064-CML-2283. Various designs of agent containers and opening mechanisms were studied, methods for controlling the temperature of the fill between the limits of 43 F and 75 F were devised, and ballistic problems were investigated.

*See CCTC Item 2709: The E73R1 is now the standard-type Bomb, Biological, TX1, 500-lb., M115

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Bomb, Biological, 750-lb., E86 R 1 S 7 July 1952

SECRET

This is a 750-lb. size bomb, similar in configuration to the E53 high speed cluster adapter (CmlC Item). The Bomb will be equipped with thermostatically controlled electrical heaters, suitable insulation and time fuzes. The agent consists of dry particulate material adhered to a light weight dry carrier. The agent is contained in several 12" diameter plastic containers filled with opening mechanisms. The bomb time fuzes function to open the bomb body to disperse the plastic containers and the opening mechanisms of the released containers function to disseminate the agent. (4-04-14-002)

(no reference)

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