



**DEPARTMENT OF DEFENSE EXPLOSIVES SAFETY BOARD  
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DDESB-PD

JUL 26 2006

MEMORANDUM FOR DIRECTOR, U.S. ARMY DEFENSE AMMUNITION CENTER,  
ATTENTION: SJMAC-EST

SUBJECT: Request for Approval of Magazine Design Drawings from Republic of Korea Army (ROKA)

- References:
- (a) USADAC, SJMAC-EST Memorandum, Subject as above, 26 May 2006
  - (b) DDESB Memorandum, 23 September 2003, Subject: Request for Approval of the Republic of Korea (ROK) Ministry of National Defense (MND) Standard Design Drawings of Igloo Type Storage (63 Pyung), Dated August 2000
  - (c) DDESB Technical Paper 15, Approved Protective Construction, Revision 2, June 2004

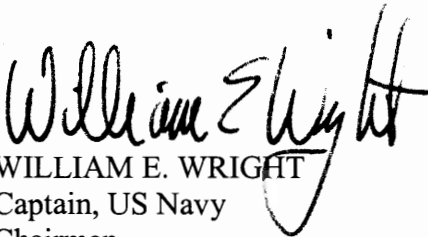
Republic of Korea Army (ROKA) earth-covered magazine (ECM) design Igloo Type 63 Pyung, dated March 2006, is approved as a 7-Bar ECM design based on the following:

- a. The design drawings are as provided in reference (a).
- b. This design is a modification of the design approved by reference (b), which is an adaptation of the U.S. Army Drawing 33-15-74. The differences between this design and the one approved per reference (b) are noted on Sheet A-101 of the design drawings. The main differences are:
  - (1) Addition of a mechanical room (approximately 11.5 feet width by 13.5 feet depth by 9.5 feet height) located directed behind the wing wall (non-blast wall) and adjacent to the side wall of the arch, with approximately 3 feet of sand separating the side wall of the mechanical room and the side wall of the arch. This mechanical room will house an air conditioning unit. The walls, slab and roof of the mechanical room are to be reinforced concrete construction.
  - (2) Addition of three penetrations (approximately 20 inches in diameter) in the side wall of the arch to allow routing of the mechanical ductwork for the air conditioning system.

This design will be added to the next revision of reference (c). Please note that there appears to be a deficiency in the drawings with regard to design of the mechanical room side walls. There is sufficient information provided to show the thickness of the side walls (approximately 12 inches), but not the reinforcing rebar sizes or spacing. There are section cuts

through the mechanical room that provide construction details for the slab, rear wall, and flat roof, but not for the side walls. A section cut through the side walls of the mechanical room is needed, or if the sides walls are to be constructed the same as the rear wall, a note is required to direct the constructor to the appropriate details for the rear wall section.

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