



**DEPARTMENT OF DEFENSE EXPLOSIVES SAFETY BOARD  
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ALEXANDRIA, VIRGINIA 22331-0600**

DDESB-PD

DEC 27 2011

MEMORANDUM FOR COMMANDER, HUNTSVILLE DIVISION, U.S. ARMY CORPS OF ENGINEERS, ATTENTION: CEHNC-ED

SUBJECT: DDESB Approval of Modular Storage Magazine (MSM), U.S. Army Corps of Engineers Standard Drawing Series 421-80-07

- References:
- (a) CEHNC-ED Memorandum of 13 December 2011, Subject: New Modular Storage Magazine (MSM) Series 421-80-07, with attachments
  - (b) U.S. Army Corps of Engineers, Huntsville Center Drawings, Modular Storage Magazine, Box-Type STD 421-80-07 with 10'-8" Door, dated 02 December 2011
  - (c) DODM 6055.09-M, Department of Defense Ammunition and Explosives Safety Standards, 29 February 2008, Administratively Reissued 4 August 2010
  - (d) U.S. Army Corps of Engineers, Engineering and Support Center, Huntsville Drawings, Air Force Modular Storage Magazine (Modified), Box Type, Standard 42-80-06, dated 1 October 1999, Sheets S-1 through S-8, Sheets S-14 through S-18, E-1, E-2 and Air Force Modular Storage Magazine, Box Type, dated March 2002, Sheets S-9 through S-13.
  - (e) DDESB-KT Memorandum of 17 April 2002, Subject: Approval of 7-Bar Structural Strength Designation for Modular Storage Magazines (MSM) Constructed to Modified U.S. Army Corps of Engineers Drawing 421-80-06
  - (f) DDESB TP 15, Approved Protective Construction, Revision 3, May 2010

As requested by reference (a), we have reviewed the reference (b) drawings for compliance with Department of Defense explosives safety criteria found in reference (c). The attachment to reference (a) describes the modifications that have been incorporated into those drawings.

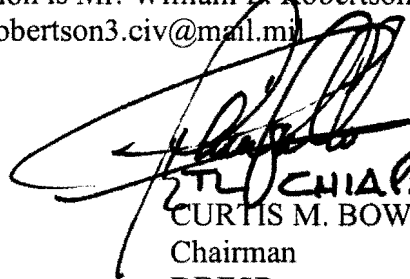
Based on our evaluation, reference (b) is approved as a 7-Bar earth-covered magazine (ECM). This new design supersedes the previous reference (d) Modular Storage Magazine, Box Type, Standard 421-80-06 (Modified) design.

The allowable Hazard Division (HD) 1.1 explosive limit for the reference (b) design is 500,000 pounds net explosive weight (NEW), as approved by reference (e).

The new drawing series corrects omissions, updates the design to meet current Computer Aided Design (CAD) standards and improves overall constructability of this economical design that has been used extensively by the Services. Lessons learned from previous construction efforts have been incorporated in the new design and a conventional load analysis was completed to assist designers during the site adaptation process.

Reference (b) will be added to Table AP 1-1 of reference (f), as approved for new construction, and reference (d) will be relocated from Table AP 1-1 to Table AP 1-2 of reference (f), as not being approved for new construction. However, any explosives safety site plans that use the reference (d) design and, as of the date of this memorandum, are currently within the review/approval process will continue to be processed by the DDESB.

The point of contact for this action is Mr. William L. Robertson, (571) 372-6776, DSN 372-6776, E-mail address: [william.l.robertson3.civ@mail.mil](mailto:william.l.robertson3.civ@mail.mil)

  
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