



ACQUISITION,
TECHNOLOGY
AND LOGISTICS

THE UNDER SECRETARY OF DEFENSE
3010 DEFENSE PENTAGON
WASHINGTON, DC 20301-3010

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MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
COMMANDER, U.S. SPECIAL OPERATIONS COMMAND
DIRECTOR, OPERATIONAL TEST & EVALUATION
DIRECTORS OF THE DEFENSE AGENCIES

SUBJECT: Design for Demilitarization of Conventional Ammunition

Demilitarization is an ever-present problem in the Department – especially for conventional ammunition due to the inherent safety hazards and environmental classification as a hazardous material. Conventional ammunition, for the purposes of this memorandum, is defined as (in DoD Directive 5160.65, Single Manager for Conventional Ammunition) encompassing any item containing propellants, explosives, or pyrotechnics.

The current U.S. military-based demilitarization stockpile of conventional ammunition is approximately 500 thousand short tons, and growing. This represents a cost to the Department not only in dollars, but also in operational readiness. Conventional ammunition systems that do not incorporate demilitarization considerations into their design are prone to present a variety of challenges at the end of the life cycle during demilitarization operations. These systems increase life cycle costs and create safety and environmental issues. They also create missed opportunities to recover value through reclamation and reuse of conventional ammunition materials and components. The Acquisition Community has an opportunity to address proactively these problems for future conventional ammunition.

Good systems engineering addresses all aspects of the life cycle, including systems' demilitarization and disposal. During system design, conventional ammunition designers can facilitate optimal demilitarization methods and resource reclamation and reuse by implementing Design for Demilitarization. This includes designs for conventional ammunition that: facilitate disassembly and access to energetic materials; use energetic materials and components having reclamation or reuse potential; efficiently accommodate existing demilitarization processes; reduce the use of environmentally sensitive materials; and enhance safety for demilitarization operators.

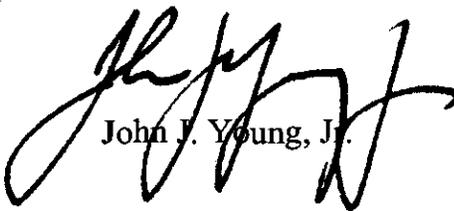
To implement Design for Demilitarization, the Military Departments, Defense Agencies, and the U.S. Special Operations Command will include in their acquisition documentation for all pending (i.e., pre-Milestone A) and future conventional



ammunition programs how they intend to address demilitarization design requirements throughout system design. Specific requirements for Design for Demilitarization of conventional ammunition are attached.

This policy supports the Department's objectives in Total Life Cycle Management. While this effort focuses primarily on conventional ammunition, Design for Demilitarization is a good systems engineering practice that should be applied to all defense programs.

My point of contact is Mr. Jose Gonzalez at 703-693-9203. Additional assistance can also be obtained from Mr. Gary Mescavage, with the Armament Research, Development, and Engineering Center, at 973-724-3349.



John J. Young, Jr.

Attachment:
As stated

ATTACHMENT

Requirements for Design for Demilitarization of Conventional Ammunition

- Demilitarization design requirements for conventional ammunition shall be defined in acquisition documentation (e.g., Technology Development Strategy, Acquisition Strategy, Statements of Work, Performance Specification, and Source Selection Plan).
- Demilitarization design requirements for conventional ammunition shall be included throughout the systems engineering process and documented in the Systems Engineering Plan.
- Design for demilitarization activities and status shall be addressed in both informal program reviews (e.g., IPT meetings) as well as formal requirements and design reviews for conventional ammunition (e.g., System Requirements Review, System Functional Review, Preliminary Design Review, Critical Design Review, Functional and Physical Configuration Audits, System Verification Review, Milestone B entrance review, and Milestone C exit review).
- Valid and realistic estimates of demilitarization cost shall be included in Life Cycle Cost/affordability estimates for conventional ammunition. An understanding of the actual demilitarization processes to be employed should be incorporated in these estimates.
- A Demilitarization Plan shall be developed prior to Milestone C and documented in the Systems Engineering Plan to describe the procedures, processes, and technologies to be used for demilitarization of conventional ammunition. The plan shall use and demonstrate the Design for Demilitarization features incorporated in the system's design.
- Demilitarization testing shall be documented in the Test and Evaluation Master Plan and conducted during Developmental Testing to validate that the demilitarization design requirements have been met.