



THE ASSISTANT SECRETARY OF THE NAVY
(Research, Development and Acquisition)
WASHINGTON DC 20350-1000

APR 05 2006

MEMORANDUM FOR DISTRIBUTION

SUBJECT: Health-hazard Assessments for Tungsten Alloy Munitions

Effective immediately, all Navy and Marine Corps munitions acquisition programs shall address tungsten alloy munitions as a potential health hazard on all ongoing and future procurements. The attachment requests deliberate action to ensure that appropriate health-hazard assessments are included in human systems integration plans for tungsten/alloy munitions either employed or under consideration for employment by U.S. forces.

This hazard shall be addressed under the Environment, Safety and Occupational Health (ESOH) program requirements of DoDI 5000.2, which require Programmatic ESOH Evaluations and direct "During system design, the PM shall document hazardous materials used in the system and plan for the system's demilitarization and disposal." SECNAVINST 5000.2C provides Navy-specific ESOH guidance and requires "As part of risk reduction, the PM shall prevent ESOH hazards where possible, and manage ESOH hazards where they cannot be avoided."

A handwritten signature in cursive script that reads "Delores M. Etter".

Delores M. Etter

Attachment:
As stated

SUBJECT: Health-hazard Assessments for Tungsten Alloy Munitions

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MEMORANDUM FOR SECRETARY OF THE ARMY

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(ATTN: ASSISTANT SECRETARY OF THE AIR FORCE
(ACQUISITION))

CHAIRMAN OF THE JOINT CHIEFS OF STAFF

(ATTN: COMMANDER, UNITED STATES SPECIAL
OPERATIONS COMMAND)

SUBJECT: Health-hazard Assessments for Tungsten/Alloy Munitions

I request that you take deliberate action to ensure that appropriate health-hazard assessments are included in human systems integration (HSI) plans for tungsten/alloy munitions either employed or under consideration for employment by U.S. forces.

Recent research in a DoD laboratory (see report at attachment 1) identified a potential health hazard—namely, aggressive carcinogenicity—related to employment of munitions containing 91% tungsten, 6% nickel and 3% cobalt. These elements are present in existing munitions in the U.S. inventory and may be present in experimental munitions. Dr. William Winkenwerder, Assistant Secretary of Defense (Health Affairs), brought this research to my attention in the context of concerns about operational medical support processes and treatment policy—for example, treatment of personnel with embedded fragment injuries from US munitions. One complicating factor is uncertainty about which element or combination poses the actual health risk.

A USD (AT&L) memorandum of September 23, 2004, (attachment 2) directed Military Departments and Defense Agencies to take specific actions that emphasize system safety within the acquisition process. DoD Instruction 5000.2, "Operation of the Defense Acquisition System," Enclosure 7, Human Systems Integration, of May 12, 2003, and the *Defense Acquisition Guidebook* (<http://akss.dau.mil/dag/>), Chapter 6, set forth policy that health-hazard assessments be conducted for acquisition items as appropriate under an HSI plan.



It is important that you carefully address HSI requirements and health-hazard assessment for munitions, including the effects of embedded fragments on US and Coalition personnel, in accordance with established acquisition policy. In light of the research cited by Dr. Winkenwerder, the status of existing health-hazard assessments on all tungsten-containing munitions as well as other new munitions compositions should be reconsidered. By January 31, 2006, please undertake such reconsideration and report significant findings and recommendations to the Director, Defense Research and Engineering, and the Director, Defense Systems.

Protecting the health of our military forces is a key ethical obligation, is an operational imperative and is integral to Defense acquisition policy. I ask you to join me in this effort to improve health outcomes for those who take weapon systems into harm's way on behalf of our Nation.



Kenneth A. Krieger

Attachments:
As stated

cc:
Director, Defense Systems
Director, Defense Research & Engineering
Director, Environmental Readiness & Safety