



DEPARTMENT OF THE NAVY

NAVAL SEA SYSTEMS COMMAND  
WASHINGTON, D.C. 20362

IN REPLY REFER TO

8128  
Ser 6445/394

JAN 25 1985

From: Commander, Naval Sea Systems Command  
Washington, D.C. 20362, Attn: SEA-644  
To: Director, Nuclear Material Safety and Safeguards,  
US Nuclear Regulatory Commission,  
Washington, D.C. 20555  
VIA: Director, Naval Sea Systems Command Detachment,  
Radiological Affairs Support Office (RASO),  
Yorktown, VA 23691-5000

Subj: SOURCE MATERIAL LICENSE SUB-1190

Ref: (a) MTG btwn Mr. J. Taschner, NAVSEA 644B, Mr. K. Rimm, NAVSEA-6445 and  
Mr. J. Hickey, NRC Licensing Branch, of 12 Dec 84  
(b) NAVSEA Memo, 8128, Ser 6445/386 of 12 Dec 84,  
"10 CFR 20.203(e) Posting Exemption for Navy Depleted Uranium  
(DU) munition in Naval Warships"  
(c) Phoncon btwn Mr. B. Carrico, NRC Licensing Branch and  
Mr. K. Rimm, NAVSEA 6445, of 13 Dec 84

Encl: (1) Ingalls Sign No. 5246

1. As discussed during reference (a) and documented by reference (b), request that Source Material License SUB-1190 be amended to authorize a waiver from the "Caution Radioactive Material" posting requirement specified in 10 CFR 20.203(e) for depleted uranium (DU) munitions in Naval warship magazines. The Navy will post Ingalls sign No.5246 provided as enclosure (1) or equivalent instead of the "Caution Radiological Material" sign. Our waiver request applies to Naval warship magazines and does not apply to shore based magazines which will continue to be posted in accordance with 10 CFR 20.203(e). The Navy will continue to ensure that personnel who enter Naval DU munition magazines are instructed in the health protection problems associated with handling DU munitions as required by 10 CFR 19.12.

2. The following supplemental information is provided as requested during reference c. The Navy does not label 20 mm, DU ammunition containers with "Caution or Danger Radioactive Materials" signs. Labeling is not required pursuant to 10 CFR 20.203 f(3)(V) and (VI). During transportation, labels are not required pursuant to 49 CFR 173.422 based upon an average U-235 content per container of 13.9 gms. (100 rounds per can, 70 gms of DU per round, .1986% U-235 by weight). When not being transported, DU ammunition containers are stowed in locked Naval ammunition magazines which are located at guarded Naval Stations and in Naval warships. Access to Naval ammunition magazines is limited to authorized personnel. Each 20 mm, DU ammunition container is marked with Naval Ammunition Logistics Code (NALC), Mark (MK) and Modification (MOD). Personnel with magazine access are aware which NALC, MK and MOD represent 20 mm, DU cartridges.

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3. Point of contact at Naval Sea Systems Command concerning this matter is Mr. Kip Rimm (202) 692-1223/1252.

*John C. Taschner*

John C. Taschner  
By direction

# **SAFETY PRECAUTIONS**

## **CIWS MK 15 AMMUNITION HANDLING**

1. THE CARTRIDGE MK 149 MOD 0 AUTHORIZED FOR USE IN CIWS IS CLASSIFIED AS CLASS C EXPLOSIVE. THE PRIMER AND PROPELLANT ARE THE ONLY COMPONENTS HAVING POTENTIAL EXPLOSIVE HAZARD. THIS AMMUNITION MUST BE HANDLED IN ACCORDANCE WITH OP 4. THE CARTRIDGE CONTAINS AN ELECTRIC PRIMER AND IS THEREFORE SUBJECT TO RADIATION HAZARD (RADHAZ). ALL HF TRANSMITTERS (2-32 MHZ) AND B-BAND RADARS (200-450 MHZ) SHOULD BE SECURED WHEN IT IS NECESSARY TO HANDLE UNLINKED AMMUNITION, SUCH AS WHEN CLEANING A GUN JAM.
2. AMMUNITION ON DECK, OUT OF ITS APPROVED CONTAINER AND NOT IN THE GUN SYSTEM, SHOULD ALWAYS BE HANDLED IN THE APPROVED MK 7 MOD 1 RADHAZ LINKS. ANY LOOSE AMMUNITION THAT IS EXPOSED TO RF FIELDS SHOULD BE DISPOSED OF IMMEDIATELY. ANY CONDUCTING OBJECT IN CONTACT WITH THE PRIMER, INCLUDING PERSONNEL TOUCHING THE PRIMER, IN AN RF FIELD CAN CAUSE THE PRIMER TO DETONATE. EXTREME CAUTION SHOULD BE EXERCISED WHEN IT IS NECESSARY TO HANDLE LOOSE AMMUNITION.
3. THE CARTRIDGE MK 149 MOD 0 CONTAINS A SUBCALIBER HEAVY METAL PENETRATOR OF DEPLETED URANIUM (DU). THE RESIDUAL RADIATION LEVEL OF THE DU, PRIMARILY ALPHA PARTICLES, IS SO LOW AS TO PRESENT NO HAZARDS TO PERSONNEL. THE ONLY PERSONNEL HAZARD FROM DU IS ITS TOXICITY, THAT IS, THE POSSIBILITY OF HEAVY METAL POISONING IF ANY DU IS INGESTED INTO THE BODY. IN ITS UNFIRED STATE, THE DU PENETRATOR IS ENCASED IN A PLASTIC SABOT THAT EFFECTIVELY PROTECTS OPERATING PERSONNEL FROM CONTACT WITH THE HEAVY METAL. HOWEVER, IF A CARTRIDGE SHOULD BECOME DAMAGED AND EXPOSE THE DU DURING HANDLING, OR IF DEBRIS FROM TARGETS THAT HAVE SUSTAINED HITS IS RECOVERED BY SHIPBOARD PERSONNEL, POSSIBLE HEAVY METAL POISONING MAY RESULT. LOOSE DU PENETRATORS AND TARGET DEBRIS SHOULD BE HANDLED ONLY WITH HEAVY GLOVES. SPECIAL CARE SHOULD BE EXERCISED IF ANY PART OF THE OBJECT BEING HANDLED CONTAINS JAGGED METAL THAT CAN EASILY TEAR THROUGH GLOVES AND OTHER CLOTHING TO DAMAGE THE SKIN. HANDS SHOULD BE WASHED THOROUGHLY AFTER ANY HANDLING OPERATION, AND ANY CUTS OR BRUISES SUSTAINED DURING THE OPERATION SHOULD BE REPORTED IMMEDIATELY TO THE MEDICAL OFFICER.

INGALLS NO. 5246

**ENCLOSURE(/)**