



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-4005

October 19, 2006

Lt. Col. Mark Wrobel
Department of the Air Force
USAF Radioisotope Committee
HQ AFMOA/SGPR
110 Luke Ave., Suite 405
Bolling AFB, DC 20032-7050

**SUBJECT: RESPONSE TO REQUEST TO REVIEW DISPOSAL OF F-4 JET ENGINE
GEARBOXES CONTAINING MAGNESIUM-THORIUM ALLOYS**

Dear Lt. Col. Wrobel,

By electronic mail dated October 6, 2006, Dr. Ramachandra Bhat requested the U.S. Nuclear Regulatory Commission (NRC) to review two (2) proposed statements that provide the regulatory boundary for transferring F-4 jet engine gearboxes which contain magnesium-thorium alloy, with less than 4% by weight of thorium. The statements will be provided to the Radiation Safety Officer (RSO) at Davis-Monthan Air Force Base (AFB).

The regulation in 10 CFR 40.13(c)(4) states:

"Any person is exempt from the regulation in this part and from the requirements for a license set forth in section 62 of the Act to the extent that such person receives, possesses, uses, or transfers: ...(4) Any finished product or part fabricated of, or containing tungsten or magnesium-thorium alloys, provided that the thorium content of the alloy does not exceed 4 percent by weight and that the exemption contained in this subparagraph shall not be deemed to authorize the chemical, physical, or metallurgical treatment or processing of any such product or part."

This provision of the regulation allows the Department of the Air Force to transfer source material (magnesium-thorium) that is less than 4 percent by weight of thorium to any person because such transfer is exempt from the licensing requirements of the Act and regulations in this part, to the extent permitted under such exemption. Additionally, the regulations do not authorize disposal except in accordance with the provisions of 10 CFR Part 20.

Your proposed statements correctly summarize the NRC regulatory requirements and provide the regulatory boundary for transferring F-4 jet engine gearboxes which contain magnesium-thorium alloys in which the thorium content does not exceed 4 percent by weight. It is recommended that you use the term "regulation" in lieu of "standard" when you are referring to the regulations in this part.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

Should you have any questions concerning this matter, please contact me at (817) 276-6552.

Sincerely,

/RA/

Rachel S. Browder, Health Physicist
Nuclear Materials Inspection Branch

Docket No.: 030-28641
License No.: 42-23539-01AF

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RIV Materials Docket File - 5th floor

SUNSI Review Completed: _____ ADAMS: Yes No Initials: RSB3
 Publicly Available Non-Publicly Available Sensitive Non-Sensitive

DOCUMENT NAME: C:\FileNet\ML062920440.wpd

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