



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
612 EAST LAMAR BLVD, SUITE 400  
ARLINGTON, TEXAS 76011-4125

November 19, 2008

Department of the Air Force  
USAF Radioisotope Committee  
ATTN: Lt. Col. Craig Adams, Chief  
Radiation Programs  
AF Medical Support Agency/SG3PB  
1400 Key Blvd., Nash Bldg, Suite 400  
Rosslyn, VA 22209-1554

SUBJECT: NRC JURISDICTION FOR TRANSFER OF AIRCRAFT CONTAINING  
RADIUM-226

Dear Lt. Col. Adams,

The NRC received your email dated November 18, in which you requested clarification regarding the transfer of aircraft containing radium-226 painted components.

As background regarding your request, on August 8, 2005, the President signed the Energy Policy Act of 2005 (EPAAct) into law. The EPAAct expanded the definition of byproduct material as given in Section 11e. of the Atomic Energy Act of 1954 (AEA), as amended. This change placed additional byproduct material, including discrete source of radium-226, under the NRC's jurisdiction, as defined in paragraphs 11e.(3) and 11e.(4) of the AEA. The NRC published its final regulations on October 1, 2007 (Volume 72, page 55864, of the Federal Register (72 FR 55864)). These final regulations became effective on November 30, 2007, and can be accessed on the NRC's Public Involvement Rulemaking Web site at: <http://www.nrc.gov/about-nrc/regulatory/rulemaking/public-involvement.html>.

The Federal Register (72 FR 55864) documents the NRC Office of General Counsel's determination that discrete sources of radium still in the control of the Military is not subject to the EPAAct. Therefore, the NRC has no jurisdiction over the Military use of radium-226. If the Military sells the aircraft to another country, then there are no export regulations since the radium is not subject to NRC regulations.


If the Military sells the aircraft to a third party within the United States, Federal entity, Indian Tribes or territories under the United States jurisdiction, then there is a general license under 10 CFR 31.12 for radium-226 installed in air, sea, or land vehicles. This general license would apply to the purchaser of the aircraft that contained radium-226 dials or painted components. If the purchaser, who is under the jurisdiction of the United States, removed the dials, gauges, and painted items from the aircraft (or sea, land vehicles) then they may have no more than 100 items used or stored at the same location under the general license requirements in 10 CFR 31.12. In this context, "same location" refers to a single building where up to 100 radium-226 sources may be safely used or stored at any one time under a general license. This requirement is designed to

minimize the potential likelihood of a significant radiation exposure to an individual. In addition, there are additional controls established under the general license which the entity would have to adhere to. However, once the entity obtained more than 100 items in the same location, then the entity would be required to apply for a specific license for the luminous items.

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>.

If there are any additional questions, please contact me at 817-276-6552 or by email at [rachel.browder@nrc.gov](mailto:rachel.browder@nrc.gov).

Sincerely,

A handwritten signature in cursive script that reads "Rachel S. Browder".

Rachel S. Browder, Health Physicist  
Nuclear Materials Safety Branch B

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