UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

May 10, 2018

Mr. Glenn L. Gebele, Chief
Office of Safety and Environmental Health Division
COMMANDANT (CG-113)
U.S. Coast Guard STOP 7907
2703 Martin Luther King Jr. Ave., S.E.
Washington, D.C. 20593-7907

SUBJECT: POSSESSION AND USE OF RADIUM-226 DEVICES

Dear Mr. Gebele:

The U.S. Nuclear Regulatory Commission's (NRC) staff became aware of a number of radium devices with U.S. Coast Guard markings that were brought to a landfill in New Jersey in late 2016. The NRC staff understands that those particular radium devices may not have been in U.S. Coast Guard possession and thus not necessarily U.S. Coast Guard's responsibility for proper disposal. However, that incident, coupled with the NRC recently entering into a Memorandum of Understanding with the U.S. Department of Defense on radium-226 (NRC's Agencywide Documents Access and Management System (ADAMS) Accession No. ML16092A294), and learning of contamination where military ship and airplane gauge repair and refurbishment activities previously took place, has prompted the question as to whether radium devices or contamination could exist at U.S. Coast Guard facilities.

The Energy Policy Act of 2005 expanded NRC's jurisdiction to include regulation of discrete sources of radium-226; discrete sources of naturally occurring radioactive material; and accelerator-produced radioactive material for use for a commercial, medical, or research activity (collectively, these materials are referred to as NARM). Discrete source is defined at Title 10 of the *Code of Federal Regulations* (10 CFR) sections 20.1003, 30.4, 110.2, and 150.3 as "a radionuclide that has been processed so that its concentration within a material has been purposely increased for use for commercial, medical, or research activities." The statements of consideration/preamble for the NARM Rule noted that "once a discrete source meets the definition of byproduct material, any contamination resulting from the use of such discrete sources of this byproduct material will also be considered byproduct material" (72 FR 55871). Examples of discrete sources of radium the NRC has identified at other sites include ship deck markers, compasses, airplane/ship dials, and contamination resulting from repair or storage of these items.

NRC staff has been in contact with Ms. Carolyn Onye of your staff regarding the topic of whether the U.S. Coast Guard currently possesses radium-226 devices or contamination, and we appreciate her insights and willingness to work with the NRC staff. It is the NRC staff's understanding that the U.S. Coast Guard has started an internal effort to look into this matter. If this is the case, the NRC staff would like to be kept informed about the U.S. Coast Guard's ongoing efforts and the results. The NRC staff is requesting a response to this letter within 120 days.

If it is determined that radium-226 devices and/or contamination are in the U.S. Coast Guard's possession, the NRC will seek to work collaboratively with the U.S. Coast Guard on an appropriate regulatory approach for the implementation of NRC's jurisdiction. This collaborative effort would focus on ensuring public health and safety if any radium contamination or large number of radium-226 devices are discovered.

In summary, the NRC is seeking to be kept informed about ongoing U.S. Coast Guard efforts to understand whether: 1) there are any U.S. Coast Guard facilities with discrete sources of radium (e.g., a large number of devices with radium-226); and 2) there are any facilities with the potential for discrete sources of radium contamination or where contamination has been identified. NRC staff would like to continue the productive and collaborative relationship with U.S. Coast Guard staff to answer these questions and to define a future NRC regulatory approach if radium is identified.

In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's ADAMS. ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html.

If you have any questions on this letter, please contact Mr. Stephen Koenick, Chief, Materials Decommissioning Branch, Division of Decommissioning, Uranium Recovery and Waste Programs, Office of Nuclear Materials Safety and Safeguards, at (301) 415-6631, or Mr. Richard Chang, Project Manager, at (301) 415-5888.

Sincerely,

/RA/

John R. Tappert, Director
Division of Decommissioning, Uranium Recovery
and Waste Programs
Office of Nuclear Material Safety
and Safeguards

SUBJECT: POSSESSION AND USE OF RADIUM-226 DEVICES **DATE** May 10, 2018

ADAMS Accession No.: ML17270A078

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