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No: I-24-016 CONTACT: <u>Diane Screnci</u>, 610-337-5330 <u>Neil Sheehan</u>, 610-337-5331

NRC Proposes \$9,000 Fine for Connecticut Hospital for Improper Handling and Transfer of Nuclear Materials

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The Nuclear Regulatory Commission has proposed a \$9,000 <u>civil penalty</u> for Yale-New Haven Hospital for violations involving the improper handling and transfer of NRC-licensed nuclear materials. The hospital, in a written response to the NRC, did not contest the violations.

In December 2023, the hospital, located in New Haven, Connecticut, notified the NRC that an unused vial of lutetium-177 had been recovered at a lead-disposal facility after setting off radiation alarms. The vial holding the isotope, which is used for targeted nuclear medicine therapy for certain types of tumors and prostate cancer, was inside a lead transfer container when it was discovered. It did not have any external contamination and was not damaged. In addition to the vial, several empty lead containers with external lutetium-177 contamination were also found.

Connecticut Department of Energy and Environmental Protection staff responded to the disposal facility, conducted radiological surveys and determined the vial came from Yale-New Haven Hospital. The hospital's radiation safety officer retrieved the materials the same day. No radiation overexposures are believed to have occurred.

Subsequent NRC inspections found that a nuclear medicine technologist earlier in December had gathered materials from storage in a nuclear medicine hot lab at the hospital. The technologist failed to properly perform radiation checks on the exterior of the items or to check the containers for internal contents. The containers were then transported to the disposal facility, where they set off an alarm at the weigh station, leading to the response actions.

Based on the NRC's reviews, the agency identified two violations: a failure to appropriately dispose of NRC-licensed materials; and a failure to appropriately monitor the materials prior to disposal.

"In this case, there was a breakdown when it came to thoroughly checking the transfer containers for radiation prior to their removal from the hospital," NRC Region I Administrator Raymond Lorson said. "Ensuring NRC-licensed materials are properly handled is essential when it comes to protecting workers, the public and the environment."

The hospital has instituted corrective actions that include using a standard operating procedure for radioactive waste decay during the storage and disposal of such materials and another for the disposal of lead materials. Nuclear medicine staff at the facility would be required to undergo training on these new procedures and attest to compliance.