

U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.: 999-90002
License No.: None
Report No.: 999-90002/96-06
Licensee: Dublin Animal Hospital
Location: 733 East Broad Street
Dublin, Virginia
Date: October 2, 1996
Inspectors: John M. Pelchat, Health Physicist
Approved by: Charles M. Hosey, Chief
Materials Licensing/Inspection Branch 1
Division of Nuclear Materials Safety

Enclosure

EXECUTIVE SUMMARY

Dublin Animal Hospital

NRC Inspection Report No. 999-90002/96-06

This reactive, announced inspection was conducted to evaluate the circumstances surrounding the discovery of an abandoned strontium 90 (Sr-90) eye applicator in the public domain. This included discussions with cognizant facility personnel and observations and surveys of the device and its storage area, as well as the status of efforts to dispose of the device.

LIST OF PERSONS CONTACTED

Dublin Animal Hospital

B. Farmer, Office Manager
M. Bruck, DVM, Staff Veterinarian

In addition, other members of the staff were interviewed.

REPORT DETAILS

01. Scope of Program

Dublin Animal Hospital is a veterinary practice limited to the diagnosis and treatment of small animals. The facility is not an NRC licensee. Discussions with NRC Region II staff and interview of the office manager revealed that the previous owner of the facility had been an NRC licensee.

Review of archived records of terminated licenses indicated that Dublin Animal Hospital was licensed by the Atomic Energy Commission (AEC) to possess and use a Sr-90 eye applicator for ophthalmic research on domesticated animals. The license was originally issued December 18, 1963 and listed Ray E. Jacobson, DVM; Lewis N. Springer, DVM; and David C. Stanley, DVM, as authorized users. The license was terminated on the basis of a AEC "Certificate - Disposition of Radioisotopes," signed by Dr. Stanley on February 16, 1968. The certificate listed Dr. Stanley only as an individual radioisotope user. Dr. Stanley checked the box on the certificate that indicated that "NO BYPRODUCT MATERIALS HAVE BEEN PROCURED AND/OR POSSESSED BY THE LICENSEE. Interviews of the office manager indicated that Dr. May purchased the practice from Dr. Stanley in early January 1996.

02. Review of Circumstances of Discovery of Licensed Material in the Public Domain (87100)

On August 8, 1996, Dublin Animal Hospital notified the NRC Region II office of the discovery of a wooden box bearing a label that read: "CAUTION, Radioactive Material." In subsequent conversations with Mary May, DVM, the current owner of the practice, as well as with the former owner, the NRC determined that the radioactive material had been acquired by a veterinarian physician formerly involved in the practice. On August 26, 1996, the NRC issued a Confirmatory Action Letter to Dublin Animal Hospital that documented the facility's agreement to maintain the device in locked storage until the NRC notified them of what further actions to take or until the device was transferred to a person specifically licensed to possess it.

On the date of the inspection, the Dublin Animal Hospital office manager escorted the inspector to Dr. May's office where the device was being stored. The device was locked in the left-hand file drawer of Dr. Mays desk. A survey was made of the desk using a Ludlum Model 3 survey meter equipped with a Ludlum 44-9 "pancake" G-M probe (NRC No. 043996, calibrated January 25, 1996. The results of the survey are summarized below:

LOCATIONRESULTS

The front exterior of the file drawer containing the device	0.05 millirem per hour (mR hr ⁻¹) on contact
The back exterior of the desk adjacent to the file drawer	0.3 mR hr ⁻¹ on contact
The left-hand exterior surface of the "leg-well" adjacent to the file drawer	0.3 mR hr ⁻¹ on contact
The left-hand exterior of the desk	1.6 mR hr ⁻¹ on contact, 0.05 mR hr ⁻¹ at one meter

The office manager removed the device's storage container from the desk. Survey of the container measured 1.0 - 9.0 mR hr⁻¹ on contact. Two labels were affixed to the storage container's exterior. Radioactive contamination samples detected no removable activity on the container exterior. The front label read: "Medical Applicator, Tracer-lab, Waltham 54, MASS, USA." The top label bore the radiation symbol trefoil and read: "CAUTION RADIOACTIVE MATERIAL, ISOTOPE Sr 90, QUANTITY 54 MC. (sic), 1-14-64."

The container was opened briefly to verify the security of the device and to identify any other distinguishing markings. A label was found on the interior of the container top that read: "RA-1A Medical Applicator, serial no. 983, 1-14-64, 46 roentgen equivalent beta per second". Calculations by the inspector indicate that the source activity has decayed to 24 millicuries.

Interviews of the office manager and a staff veterinarian indicated that the desk in which the device was stored was used on a daily basis by all of the veterinarians. A staff veterinarian estimated that individuals typically sat at the front or back of the desk about an hour each day. Based on radiation levels at the front and back of the desk, a person sitting at the desk one hour each day would receive an exposure of approximately 78 millirem in a year. This is less than the 100 millirem per year dose limit established for individual members of the public in 10 CFR 20.1301.

The inspector toured the facility with the staff veterinarian and the office manager to identify potential alternative storage areas for the device. After discussions with facility staff, the device was moved to a storage building located behind the main hospital building. The building is used to store bulk supplies. Facility staff enter the building for brief periods three to four times a day. The door of the building is secured with a large keyed "Master" padlock. The device was placed into a recess located in a remote corner of the building. Radiation surveys of the container in place measured 0.3 mR hr⁻¹ on

contact and 0.05 mR hr^{-1} at one meter. Generally staff obtaining supplies from the building would not approach within two meters of the device storage container. The office manager stated that all facility staff would be advised of the device's new storage location and to ensure that the storage building door was securely locked.

03. Conclusion

The inspector concluded that the Sr-90 source was in safe and secure storage. Persons working in the vicinity of the device did not receive exposures in excess of the limit for individual members of the public established in 10 CFR 20.1301. However, so as to keep radiation exposures to the Dublin Animal Hospital staff as low as reasonably achievable, the device was placed in a remotely located secure storage area. Arrangements for the disposal of the device remain unresolved.

EXIT MEETING SUMMARY

The inspector presented the inspection results to facility representatives at the conclusion of the inspection on October 2, 1996. The inspector discussed the new storage arrangements for the device with the facility representatives present. The inspector also discussed the status of the device with facility owner during an October 29 1996 telephone conversation. Facility representatives did not identify any documents or processes as proprietary in nature, and no dissenting comments were received from the licensee.

INSPECTION PROCEDURES USED

IP 87100: Licensed Materials Program
IP 87103: Inspection of Incident at Nuclear Material Facilities