



DEPARTMENT OF VETERANS AFFAIRS
Veterans Health Administration (VHA)
National Health Physics Program (NHPP)
2200 Fort Roots Drive
North Little Rock, AR 72114

January 12, 2021

U.S. Nuclear Regulatory Commission (NRC)
ATTN: Document Control Desk
11555 Rockville Pike
Rockville, Maryland

Re: NRC Master Materials License 03-23853-01VA; VHA Permit No. 24-00589-01

Dear Sir or Madam:

I am enclosing a written report regarding an incident that occurred at the VA Medical Center, Kansas City, Missouri. The facility is a permittee under the VHA Master Materials License (NRC License No. 03-23853-01VA) and is issued VHA Permit No. 24-00589-01. This written report is submitted pursuant to 10 CFR 20.2203.

The report documents a dose in an unrestricted area greater than 10 times the public limit in 10 CFR 20.1301(a)(2) of 2 millirem in 1 hour. The incident occurred when a package, received by the permittee, was left in an unrestricted area for approximately 24 hours. Per 10 CFR 20.2203(a)(3)(ii), a report to NRC is required whether or not an individual was actually exposed above a dose limit. Based on information provided to our office by the permittee, the incident did not result in any individual (employee or member of the public) receiving a significant exposure.

We will evaluate the incident and the effectiveness of the permittee's corrective actions contained in the written report during the permittee's next inspection.

Please contact me, at telephone number 916 833-8415, if you require additional information about this matter.

Sincerely,

Edwin M.

Leidholdt 398105

Digitally signed by Edwin M.
Leidholdt 398105
Date: 2021.01.12 09:05:41
-08'00'

Edwin M. Leidholdt Jr., Ph.D., FACR
Director, VHA National Health Physics Program

Enclosure

RECEIVED JAN 14 2021

CC:

Bryan Parker

Materials Licensing Branch

Division of Nuclear Material Safety

Nuclear Regulatory Commission (NRC), Region III

2443 Warrenville Road, Suite 210

Lisle, Illinois 60532-4352

30-Day Event Report

1. VA Master Materials License Number: 03-23853-01VA
2. VHA Permittee: VA Medical Center, Kansas City, Missouri (KCVA)
3. VHA Permit Number: 24-00589-01
4. Address of event: 4801 Linwood Boulevard, Kansas City, Missouri (Buildings 1 and 6)
5. Event reporting criteria: This report is required by 10 CFR 20.2203(a)(3)(ii) because exposure levels in an unrestricted area at the permittee's address of use exceeded 10 times the limit set forth in 10 CFR 20.1301(a)(2). Specifically, the exposure level from external radiation sources exceeded 20 millirem (mrem) in an hour for a period of about 24 hours (from about 2:30 pm on December 14, 2020, until about 3:00 pm on December 15, 2020). The circumstances were associated with receipt, storage, and handling of a labeled package of radioactive materials. There were no package integrity issues, and the event did not require a telephone report to NRC. However, the incident does require a written report within 30 days of discovery.
6. Date of event discovery: The event was discovered by the KCVA Radiation Safety Officer (RSO) on December 15, 2020.
7. Specific reporting elements required by 10 CFR 20.2203(b):

i. Estimates of each individual's dose:

No individuals (workers or members of the public) associated with this event received a dose approaching or exceeding any radiation dose limits in 10 CFR Part 20. The permittee reported that only one individual had close contact (< 3 feet) with the package for a cumulative time of approximately 5 minutes. Based on KCVA RSO interviews of individuals involved and package dose rates, we estimate the maximum dose to be less than approximately 10 mrem to any individual for the duration of the event, which lasted about 24 hours.

ii. The levels of radiation and concentrations of radioactive material involved:

The incident involved a package (labeled Radioactive Yellow II) containing three sealed sources of Germanium-68 (in secular equilibrium with Gallium-68 progeny) and having a combined activity of about 4.7 millicuries (mCi). The sealed sources are used for quality control of a PET/CT imaging device at KCVA and are normally ordered and received one to two times per year. The maximum external dose rate on the package was about 22 mrem/hr at contact (which is what triggered this event report) and 1 mrem/hr at 3 feet. In addition, the permittee performed a wipe test on the package at about 3:00 pm on December 15, 2020, and identified no removable contamination above background on external package surfaces.

iii. The cause of the elevated exposures, dose rates, or concentrations:

The event involved receipt of a commercially-delivered, labeled (Radioactive Yellow II) package by permittee loading dock staff at the address in Item 4 above coupled with a subsequent delay in delivering that package in a timely manner to the Nuclear Medicine Department for radiological check-in per 10 CFR 20.1906. The loading dock areas are considered by the permittee to be unrestricted areas with respect to control of radioactive materials. As noted above, the package remained in unrestricted areas (loading dock and transfer areas) from approximately 2:30 pm on December 14, 2020, until about 3:00 pm on December 15, 2020, at which time the KCVA RSO became aware of the issue and had the package moved to restricted areas in the Nuclear Medicine Department.

The permittee identified the following basic causes of the event:

- Failure to implement established procedure or policy for radioactive materials ordering and receipt;
- Lack of training for individuals who have specific roles and responsibilities in ordering and receiving radioactive materials; and
- Lack of effective communication between staff implementing the procedure for radioactive materials ordering and receipt.

In addition, the permittee identified the following contributing factors to the event:

- Lack of availability of emergency contact information provided for the KCVA RSO for time sensitive radiation safety issues, and
- Lack of listing of a designated back-up point of contact when the KCVA RSO is away from the facility and/or unable to be reached by emergency contact information.

iv. Corrective steps taken or planned to ensure against a recurrence, including the schedule for achieving conformance with applicable limits, ALARA constraints, generally applicable environmental standards, and associated license conditions.

Prompt Actions Completed by Permittee Upon Discovery of the Event:

On December 15, 2020, upon event discovery, the KCVA RSO provided instructions to delivery dock staff to immediately deliver the package to the Nuclear Medicine Department. The dock staff promptly took the package to Nuclear Medicine, and the package was promptly checked in by nuclear medicine technologists.

Actions Completed by Permittee to Prevent Recurrence:

On December 23, 2020, the KCVA RSO took the following actions:
The KCVA RSO met with the delivery dock staff supervisor to address and review the established process of delivering radioactive packages to Nuclear Medicine regardless of the name on the shipping address. The RSO sent an email to Nuclear Medicine, Biomedical, Police, and Loading Dock departments and staff outlining the incident, immediate actions taken, established procedures for proper ordering and delivering of radioactive packages and reiterating the established process that should be followed for the delivery of any package of radioactive materials.

On January 7, 2021, the KCVA RSO completed face to face training with loading dock staff to discuss the incident and process to be followed for radioactive packages.

Actions Pending by Permittee to Prevent Recurrence:

The KCVA RSO will complete face to face training with Biomedical Department staff on the incident and process to be followed for radioactive packages. The planned completion date for this item is January 11, 2021.

The KCVA RSO will complete face to face training with Nuclear Medicine Staff on the incident and process to be followed for radioactive packages. The planned completion date for this item is January 12, 2021.

The KCVA RSO, working with Area Supervisors, will provide contact information to include emergency/after-hours phone number for the RSO and alternates to the delivery dock supervisor to be posted in the delivery dock area and to the Nuclear Medicine Supervisor to be posted in the Nuclear Medicine Department. The planned completion date for this item is January 15, 2021.

The RSO, working with the Phone Operator Supervisor, will provide contact information to include emergency/after-hours phone number for RSO and alternates to the Phone Operator Supervisor for reference by the Switchboard operators. The planned completion date for this item is January 15, 2021.

The RSO cell phone number will be added the Microsoft Outlook account, and the RSO voicemail message will be updated on RSO office line to alert caller to the emergency/after-hours contact information. The planned completion date for this item is January 22, 2021.

A clarified ordering and delivery procedure will be developed and implemented for non-pharmaceutical sources. The procedure will require written RSO approval prior to ordering such sources, specify an improved method of notifying Nuclear Medicine staff of pending orders, and specify the delivery address to be provided to vendors for such sources upon ordering. The planned completion date for this item is February 22, 2021.

The KCVA RSO, working with the Education Service, will develop and deploy training modules in the VA Training Management System (TMS) on radioactive material ordering, receipt, and delivery (as applicable to group) for loading dock staff and biomedical department staff. The planned completion date for this item is April 1, 2021.

The KCVA RSO, working with the Education Service, will modify and clarify the facility's VA police training module related to delivery of nuclear medicine packages to include deliveries from loading dock staff. The planned completion date for this item is April 1, 2021.

The KCVA RSO, working with the Education Service, will retrain Nuclear Medicine staff on radioactive material ordering and receipt procedures. The planned completion date for this item is April 1, 2021.

Action Pending by NHPP:

NHPP will review circumstances of the event as well as implementation and effectiveness of permittee-level corrective actions during a future radioactive materials safety inspection. NHPP last inspected the permittee during July 2020. The permittee is on a three-year routine inspection cycle and would not normally be due for reinspection until July 2023. There were no immediate adverse health and safety consequences from this event, exposures to individuals appear to be far below the dose limits for members of the public, and the amount of material involved was less than 1000 times quantities in 10 CFR 20, Appendix C. NHPP is considering whether to perform a reactive inspection or an early routine inspection to evaluate this event.

NHPP will share details of the event with other VHA permittees in a newsletter which will provide guidance on how to prevent such circumstances from occurring. The planned date for issuance of this newsletter is no later than March 31, 2021.

View/Print Label

1. Ensure there are no other shipping or tracking labels attached to your package. Select the Print button on the print dialogue box that appears. Note: If your browser does not support this function, select Print from the File menu to print the label.

2. Fold the printed label at the solid line below. Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.

3. GETTING YOUR SHIPMENT TO UPS

Customers with a scheduled Pickup

- o Your driver will pickup your shipment(s) as usual.

Customers without a scheduled Pickup

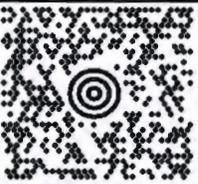
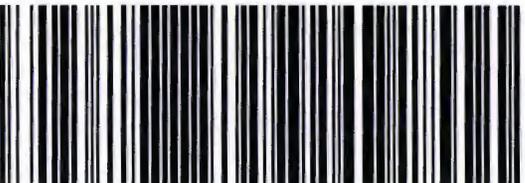
- o Schedule a Pickup on ups.com to have a UPS driver pickup all of your packages.
- o Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. To find the location nearest you, please visit the 'Locations' Quick link at ups.com.

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