UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS
WASHINGTON, D.C. 20555-0001

December 9, 2003

NRC INFORMATION NOTICE 2003-22: HEIGHTENED AWARENESS FOR PATIENTS CONTAINING DETECTABLE AMOUNTS OF RADIATION FROM MEDICAL ADMINISTRATIONS

Addressees:

All medical licensees and NRC Master Materials License medical use permittees.

Purpose:

The U.S. Nuclear Regulatory Commission (NRC) is issuing this Information Notice (IN) to alert addressees of an event where a radiation detector, installed as part of heightened homeland security measures, alarmed when a recently released radiopharmaceutical patient passed by it. In reviewing this notice, licensees are also reminded to emphasize to those patients still containing detectable amounts of radiation from medical administrations and released with written instructions in accordance with 10 CFR 35.75, the importance of following those instructions. This is essential for maintaining doses to other individuals as low as is reasonable achievable and, presently, to reduce the occurrence of patients triggering with radiation monitors, installed at public locations for increasing public security in the United States.

It is expected that recipients will review this information for applicability to their licensed operations and consider actions, as appropriate, to avoid similar problems. However, suggestions contained in this IN are not new NRC requirements; therefore, no specific action nor written response is required.

Description of Circumstances:

On March 20, 2003, a bus traveling from New York to Atlantic City set off a radiation alarm in a tunnel, as it passed by a radiation detector. When the State Police pulled over the bus, it was discovered that one of the passengers had received a 370 Megabecquerel (10 millicurie) dose of iodine-131 earlier that day from a medical procedure. Although the medical licensee provided the patient with written safety instructions, which included not using public transportation for 2 days, the patient failed to follow the instructions. This resulted in the activation of the radiation detector in the tunnel. Subsequent discussions with the patient's physician indicated that the patient's actions in taking the trip would have no safety significance to the members of the public on or near the bus. However, the event resulted in unnecessary concern and inconvenience to the patient and members of the public, as well as to law enforcement authorities and other public officials.

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Discussion:

Heightened security measures are now in effect throughout the United States. These include, but are not limited to, installation of radiation surveillance equipment at critical infrastructures and mass congregation events. Therefore, types of incidents such as the one described within this IN are likely to increase for released patients that still contain detectable amounts of radiation from medical administrations of radiopharmaceuticals and brachytherapy sources. These incidents may not be limited to those patients who are required to be provided written instructions, when released in accordance with 10 CFR 35.75, but could also include patients administered diagnostic dosages or low-level therapeutic dosages of radiopharmaceuticals. In the example above, if the patient had been administered less than 259 Megabecquerel (7 millicurie) of iodine-131, NRC regulations would not have required that the licensee provide the patient with written instructions, but the patient might still have set off a radiation detection alarm.

When licensees are required to provide written directions to patients released in accordance with 10 CFR 35.75, the licensees are expected to, among other things, review with authorized users the expectation that written instructions provided to patients will be followed. Accordingly, authorized users are expected to evaluate the patient's capability to follow recommended written instructions before release, to determine if release at that time is advisable, and stress the importance to the patient of following the written instructions.

In view of the event described and its potential for becoming more common, licensees should consider the following voluntary actions for all patients who still contain detectable amounts of radiation after receiving diagnostic or therapeutic quantities of radiopharmaceuticals or brachytherapy implants:

1. Released patients who are administered diagnostic or therapeutic quantities of radiopharmaceuticals or brachytherapy implants should be aware that their treatment may have additional implications, because of heightened security measures. Accordingly, provide all patients that still contain delectable amounts of radiation with an appropriate explanation about the potential of alarming radiation monitoring equipment.

2. To assist the patient and avoid unnecessary concern by law enforcement authorities and other public officials, consider providing the patient with the licensee's business card and written information for law enforcement use, stating that the radiation received by the patient poses no danger to the public and that it is allowed by NRC medical use regulations.

This IN requires no specific action nor written response. If you have any questions about the information in this notice, please contact one of the technical contacts listed below or the appropriate regional office.

/RA/

Charles L. Miller, Director
Division of Industrial and
Medical Nuclear Safety
Office of Nuclear Material Safety
and Safeguards

Technical Contacts: Teresa Darden, Region I
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Attachments:
1. List of Recently Issued NRC Information Notices
2. List of Recently Issued NMSS Information Notices

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Information Notice No.	Subject	Date of Issuance	Issued to
2003-21	High-Dose-Rate-Remote-Afterloader Equipment Failure	Pending	All medical licensees.
2003-20	Derating Whiting Cranes Purchased Before 1980	10/22/2003	All holders of operating licenses for nuclear power reactors, except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel; applicable decommissioning reactors, fuel facilities, and independent spent fuel storage installations.
2003-19	Unanalyzed Condition of Reactor Coolant Pump Seal Leakoff Line During Postulated Fire Scenarios or Station Blackout	10/06/2003	All holders of operating licenses or construction permits for pressurized water reactors (PWRs).
2003-18	General Electric Type SBM Control Switches With Defective Cam Followers	09/26/2003	All holders of operating licenses for nuclear power reactors, except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel.
2003-17	Reduced Service Life of Automatic Switch Company (ASCO) Solenoid Valves With Buna-N Material	09/29/2003	All holders of operating licenses for nuclear power reactors.
2003-16	Icing Conditions Between Bottom of Dry Storage System and Storage Pad	10/06/2003	All 10 CFR Part 72 licensees and certificate holders.

Note: NRC generic communications may be received in electronic format shortly after they are issued by subscribing to the NRC listserver as follows:

To subscribe send an e-mail to <listproc@nrc.gov >, no subject, and the following command in the message portion:

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CP = Construction Permit

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2003-12	Problems Involved in Monitoring Dose to the Hands Resulting from the Handling of Radiopharmaceuticals	08/22/2003	All holders of 10 CFR Parts 32, 33, and 35 licenses.
2003-10	Criticality Monitoring System Degradation at BWX Technologies, Inc., Nuclear Products Division, Lynchburg, VA	08/04/2003	All U.S. Nuclear Regulatory Commission (NRC) licensees authorized to possess a critical mass of special nuclear material.
2003-09	Source Positioning Errors and System Malfunctions During Administration of Intravascular Brachtherapy	07/16/2003	All medical licensees.

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