

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

May 13, 1998

**NRC INFORMATION NOTICE 98-18: RECENT CONTAMINATION INCIDENTS  
RESULTING FROM FAILURE TO PERFORM  
ADEQUATE SURVEYS**

Addressees:

Part 35 Medical Licensees

Purpose:

NRC is issuing this information notice to alert addressees to recent contamination incidents resulting from inadequate surveys. It is expected that recipients will review the information for applicability to their facilities and consider actions, as appropriate, to avoid problems. However, suggestions contained in this information notice are not new NRC requirements; therefore, no specific action nor written response is required.

Description of Circumstances:

During the past months, there have been two instances of radiopharmacies receiving contaminated packages from client facilities. The contamination in these cases was limited to the exterior of the package. In both cases, the packages were initially surveyed before leaving the originating facility and no contamination was found. However, a spill at each client's facility contaminated the packages resulting in removable contamination in excess of DOT's limit of 2200 dpm/100 cm<sup>2</sup> (132,000 Bq/100 cm<sup>2</sup>). The packages were not resurveyed and were released with contamination. The two cases described below involve the contamination of packages with technetium-99m (Tc-99m). An explanation of the root causes of these incidents is provided.

Case 1: A delivery driver from a radiopharmacy picked up a transport box from a client radiopharmacy to return to the licensee's facility. The package was surveyed upon receipt at its destination and found to have removable contamination of 1,400,000 dpm (84 MBq) on its exterior. The radioactive contamination was determined to be Tc-99m. The delivery driver, delivery truck, and some areas in the licensee's facility were determined to be contaminated. Discussions among the NRC, the client radiopharmacy, and the licensee determined that a syringe containing Tc-99m had been dropped near the package, causing the contamination. Apparent root causes for the contamination were: 1) failure of the licensee to identify the dropped syringe as a spill of radioactive material; and 2) failure of the licensee to perform a radiation area survey around the dropped syringe to identify the contamination on the cases.

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



Donald A. Cool, Director  
Division of Industrial and  
Medical Nuclear Safety  
Office of Nuclear Material Safety  
and Safeguards

Technical contact: Torre Taylor, NMSS  
(301) 415-7900  
Internet:tmt@nrc.gov

Attachments:

1. List of Recently Issued NMSS Information Notices
2. List of Recently Issued NRC Information Notices

*Attachments filed in Jackets*

LIST OF RECENTLY ISSUED  
NMSS INFORMATION NOTICES

Information Notice No.	Subject	Date of Issuance	Issued to
98-17	Federal Bureau of Investigations (FBI) Awareness of National Security Issues and Responses (ANSIR) Program	5/7/98	All U.S. Nuclear Regulatory Commission fuel cycle and power and non-power reactor licensees
98-16	Inadequate Operational Checks of Alarm Ratemeters	4/30/98	All Industrial Radiography Licensees
98-12	Licensees' Responsibilities Regarding Reporting and Follow-up Requirements for Nuclear-Powered Pacemakers	4/3/1998	All U.S. Nuclear Regulatory Commission nuclear pacemaker licensees
98-10	Probable Misadministrations Occurring During Intravascular Brachytherapy With The Novoste Beta-Cath System	4/3/98	All Medical Licensees
98-09	Collapse of an Isocam II, Dual-Headed Nuclear Medicine Gamma Camera	3/5/98	All medical licensees
98-08	Information Likely to be Requested if an Emergency is Declared	3/3/98	All parts 30, 40, 70, 72 and 76 licensees and certificate holders required to have a Nuclear Regulatory Commission approved Emergency plan.
98-06	Unauthorized use of License to Obtain Radioactive Materials, and its Implications Under The Expanded Title 18 of the <u>U.S. Code</u>	2/19/98	All NRC Licensees authorized to Possess Licensed Materials
98-04	1997 Enforcement Sanctions for Deliberate Violations of NRC Employee Protection Requirements	2/9/98	All U.S. Nuclear Regulatory Commission licensees.
98-01	Thefts of Portable Gauges	1/15/98	All portable gauge licensees

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98-15	Integrity of Operator Licensing Examinations	4/20/98	All holder of operating licenses for nuclear power reactors except those that have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel
98-14	Undocumented Changes to Non-Power Reactor Safety System Wiring	4/20/98	All holders of operating licenses or construction permits for test research reactors
98-13	Post-Refueling Outage Reactor Pressure Vessel Leak Testing Before Core Criticality	4/20/98	All holders of operating licenses for nuclear power reactors except those that have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel
98-12	Licensees' Responsibilities Regarding Reporting and Follow-up Requirements for Nuclear-Powered Pacemakers	4/3/98	All U.S. Nuclear Regulatory Commission nuclear pacemaker licensees

OL = Operating License  
 CP = Construction Permit