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

March 7, 1988

NRC INFORMATION NOTICE NO. 88-07: INADVERTENT TRANSFER OF LICENSED MATERIAL TO UNCONTROLLED LOCATIONS

Addressees:

All NRC broad licensees and licensees authorized to possess byproduct material as sealed sources in teletherapy units or "self-contained" irradiators.

Purpose:

This information notice is being issued to alert licensees of the need to exercise proper control over radioactive material, and to avoid inadvertent transfer of licensed material to uncontrolled locations or to unauthorized recipients. The NRC is particularly concerned about large sources such as those used in teletherapy units and irradiators. It is expected that licensees will review this information for applicability to their licensed activities, distribute the notice to responsible radiation safety staff, and consider actions, if appropriate, to prevent similar problems from occurring at their facilities. However, this information notice does not constitute new NRC requirements, and no written response is required.

Description of Circumstances:

A cesium-137 teletherapy unit in Brazil was abandoned in a building which once housed a clinic. Someone removed the teletherapy unit for its scrap metal value. While dismantling the unit, the salvagers ruptured the sealed source capsule and spread cesium-137 (as cesium chloride powder) over a large portion of a city in central Brazil.

The cesium chloride powder had an attractive color, and the salvagers shared the powder with friends and relatives. To date, four persons have died from radiation overexposures, and a number of persons are under medical surveillance. Several countries, including the United States, have assisted the Brazilian government in radiation monitoring, decontamination, and treatment of injured personnel.

Discussion:

The Brazilian incident illustrates the serious consequences which can result from failure to properly control radioactive material. Events involving loss or theft of radioactive material also occur frequently in the United States, although the events have been less serious in nature. The Commission is concerned that licensees might not, in all cases, be exercising proper management

oversight to avoid such incidents. The NRC staff is currently considering whether additional regulatory requirements should be developed in order to reduce the risk of loss of hazardous radioactive material.

In the meantime, it is suggested that licensees review their licensed programs, license, and applicable regulations in order to assure that all radioactive material is accounted for, and to determine whether adequate precautions are in place to prevent unauthorized access, theft, or loss. In particular, licensees should note the following:

1. Title 10 CFR Part 20 contains several requirements regarding posting of radiation areas, labeling of radioactive material containers, and restriction of access to radioactive material.

2. Most licensees are required by regulation or license condition to periodically inventory or leak test sealed sources at intervals of three months or six months.

3. Section 30.51 requires licensees to maintain records of receipt, transfer, and disposal of all licensed material.

4. Placing surplus radioactive material into long-term storage, when there is not an anticipated future need for the material, may eventually result in loss of the material, or access to it by persons not knowledgeable of proper precautions. If this happens, high levels of radiation exposure and widespread contamination could occur. Therefore, NRC considers that long-term storage of surplus radioactive material is undesirable. While NRC regulations do not require licensees to promptly dispose of unused radioactive material, licensee management may want to consider disposition through disposal at a licensed burial site, or transfer to another authorized licensee who would have a current need for it.

Violations of NRC requirements involving the failure to control or account for licensed material, especially if the failure results in loss or theft, will be considered for escalated enforcement action.

No written response is required by this notice. If you have any questions about this matter, please contact the appropriate NRC regional office, or this office.

Richard E. Cunningham, Director
Division of Industrial and
Medical Nuclear Safety
Office of Nuclear Material
Safety and Safeguards

Technical Contact: Jack R. Metzger, NMSS
(301) 492-3424

Attachment: List of Recently Issued NRC Information Notices

LIST OF RECENTLY ISSUED NRC INFORMATION NOTICES

Information Notice No.	Subject	Date of Issuance	Issued to
88-06	Foreign Objects in Steam Generators	2/29/88	All holders of OLs or CPs for PWRs.
88-05	Fire in Annunciator Control Cabinets	2/11/88	All holders of OLs or CPs for nuclear power reactors.
88-04	Inadequate Qualification and Documentation of Fire Barrier Penetration Seals	2/5/88	All holders of OLs or CPs for nuclear power reactors.
88-03	Cracks in Shroud Support Access Hole Cover Welds	2/2/88	All holders of OLs or CPs for BWRs.
88-02	Lost or Stolen Gauges	2/2/88	All NRC licensees authorized to possess gauges under a specific or general license.
88-01	Safety Injection Pipe Failure	1/27/88	All holders of OLs or CPs for nuclear power reactors.
86-81, Supp. 1	Broken External Closure Springs on Atwood & Morrill Main Steam Isolation Valves	1/11/88	All holders of OLs or CPs for nuclear power reactors.
87-67	Lessons Learned from Regional Inspections of Licensee Actions in Response to IE Bulletin 80-11	12/31/87	All holders of OLs or CPs for nuclear power reactors.
87-66	Inappropriate Application of Commercial-Grade Components	12/31/87	All holders of OLs or CPs for nuclear power reactors.
87-28, Supp. 1	Air Systems Problems at U.S. Light Water Reactors	12/28/87	All holders of OLs or CPs for nuclear power reactors.

OL = Operating License
CP = Construction Permit

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Ellen Kraus, editor * Mary King *SEE PREVIOUS CONCURRENCE

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DATE	2/24/88	2/24/88	2/24/88	2/25/88	2/24/88	:3 /3 /88

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Violations of Commission's requirements involving the failure to control or account for licensed material, especially if material is unaccounted for by loss or theft, will be considered for escalated enforcement action.

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3. Section 30.51 requires licensee to maintain records of receipt, transfer, and disposal of all licensed material.

4. Placing surplus radioactive material in long-term storage increases the risk of inadvertent loss, because the material may be forgotten. Licensees should promptly dispose of surplus radioactive material by transfer to an authorized recipient.

Violations of Commission's requirements involving the failure to control or account for licensed material, especially if material is unaccounted for by loss or theft, will be considered for escalated enforcement action.

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at his request with comments for

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