

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
WASHINGTON, D.C. 20555

April 8, 1987

IE INFORMATION NOTICE NO. 87-18: UNAUTHORIZED SERVICE ON TELETHERAPY UNITS
BY NONLICENSED MAINTENANCE PERSONNEL

Addressees:

All NRC licensees authorized to use radioactive material in teletherapy units.

Purpose:

This notice is provided to alert recipients that they may be in noncompliance with their NRC teletherapy licenses should "in-house" or contract maintenance personnel be used to service or repair the licensees' teletherapy equipment. It is expected that recipients will review the information for applicability to their facilities and take actions to preclude a similar problem from occurring at their facilities. However, suggestions contained in this information notice do not constitute NRC requirements; therefore, no specific actions or written response is required.

Description of Circumstances:

During recent inspections of teletherapy licensees, NRC staff discovered that some licensees are using unlicensed, "in-house" engineers, electricians, or maintenance personnel to perform maintenance or repair on teletherapy equipment. On one occasion, an NRC licensee allowed an unlicensed, "in-house" staff member to repair a valve in the pneumatic systems used to return the cobalt-60 source drawer to the shielded position in a teletherapy unit manufactured by Atomic Energy of Canada, Limited (AECL).

Other examples where maintenance or repair operations were performed by unlicensed, "in-house" staff follow:

- a. An NRC licensee performed service work on the cord reel assembly for the field defining light of an AECL Theratron 80 unit. NRC inspection findings concluded that this repair was the most likely cause for the unit's source drawer sticking in the exposed position, resulting in unnecessary exposure to two therapy technologists and the patient.
- b. Two NRC licensees were found to be in noncompliance with their licenses when it was determined that the licensees had disassembled and repaired pneumatic lines and valves.

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- c. Reports have been received from licensees and teletherapy equipment manufacturers describing instances where NRC licensees' maintenance staff have replaced or repaired interlocks to teletherapy room doors. These devices are considered a part of the teletherapy unit's safety mechanism.
- d. Reports have been received concerning NRC licensees performing "in-house" maintenance and repair upon teletherapy control panels, e.g., replacement of radiation beam guide lights which indicate source exposure, switches which activate or terminate radiation exposure, and therapy treatment timers. These devices are considered a part of teletherapy unit's safety mechanisms.
- e. Reports have been received from teletherapy equipment manufacturers and teletherapy service companies of cases where NRC licensees' staff have removed safety-related components for "in-house" repair or replacement, e.g., treatment timers, relays, and circuit boards.

Discussion:

The NRC considers such repairs as an operation defined in the standard license condition printed below. Consequently, the use of an unlicensed individual to perform certain operations is in noncompliance with this condition.

The standard license condition for all teletherapy use specifically states:

The following shall be performed only by persons specifically licensed by the Commission or an Agreement State to perform such services:

- a. Installation, relocation, or removal of teletherapy units containing sources.
- b. Source exchange.
- c. Any maintenance or repair operation on a teletherapy unit involving work on the source drawer, the shutter, or other mechanism that could expose the source, reduce the shielding around the source, or compromise the safety of the unit and result in increased radiation levels.

Not only is the maintenance described above in the license condition required to be done by persons specifically licensed to perform such services, but servicing and maintenance at 5-year intervals also is required to be performed by persons with a specific license pursuant to 10 CFR 35.26.

The NRC staff has determined that service by individuals who are unqualified and lack specific knowledge of the associated radiation hazards of the device poses a significant risk to the health and safety of individuals performing the actual repairs, patients receiving treatment, teletherapy staff technologists, and the general public in unrestricted areas adjoining the teletherapy facility.

Licenses authorized to possess and use teletherapy equipment containing cobalt-60 or cesium-137 should be aware of their responsibility to ensure compliance with 10 CFR 35.26 and the standard license condition. Licensees who desire to have these operations performed by qualified "in-house" staff members who are not authorized by the NRC or an Agreement State must request an amendment to their license.

No written response is required by this information notice. If you have questions regarding this matter, please contact the Regional Administrator of the appropriate NRC regional office or this office.

James G. Partlow, Director
 Division of Inspection Programs
 Office of Inspection and Enforcement

Technical Contacts: J. Metzger, IE
 (301) 492-4947

H. Karagiannis, IE
 (301) 492-9655

Attachment: List of Recently Issued IE Information Notices

(* see previous concurrence)

PSAS: IE
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 3/10/87*

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NAME	: JMetzger	: HKaragiannis	: GSjoblom	: RSpessard	: SSchwartz	: EJordan	: JPartlow
DATE	: 3/ /87sjr	: 3/ /87	: 3/ /87	: 3/ /87	: 3/ /87	: 4/2 /87	: 3/ /87

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LIST OF RECENTLY ISSUED
 IE INFORMATION NOTICES

Information Notice No.	Subject	Date of Issue	Issued to
87-17	Response Time of Scram Instrument Volume Level Detectors	4/7/87	All GE BWR facilities holding an OP or CP
87-16	Degradation of Static "0" Ring Pressure Switches	4/2/87	All LWR facilities holding an OL or CP
87-15	Compliance with the Posting Requirements of Subsection 223b of the Atomic Energy Act of 1954, as Amended	3/25/87	All power reactor facilities holding a CP and all firms supplying components or services to such facilities
87-14	Actuation of Fire Suppression System Causing Inoperability of Safety-Related Ventilation Equipment	3/23/87	All power reactor facilities holding an OL or CP
86-106 Sup. 2	Feedwater Line Break	3/18/87	All power reactor facilities holding an OL or CP
87-13	Potential for High Radiation Fields Following Loss of Water from Fuel Pool	2/24/87	All power reactor facilities holding an OL or CP except Fort St. Vrain.
86-106 Sup. 1	Feedwater Line Break	2/13/87	All power reactor facilities holding an OL or CP
87-12	Potential Problems With Metal Clad Circuit Breakers, General Electric Type AKF-2-25	2/13/87	All power reactor facilities holding an OL or CP
87-11	Enclosure of Vital Equipment Within Designated Vital Areas	2/13/87	All power reactor facilities holding an OL or CP
87-10	Potential for Water Hammer During Restart of Residual Heat Removal Pumps	2/11/87	All BWR facilities holding an OL or CP

OL = Operating License
 CP = Construction Permit

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	JMetzger	HKaragiannis	GSide	RSpessard	SSchwartz	EJordan	JPartlow
DATE	: 3/18/87sjr	: 3/18/87	: 3/18/87	: 3/ /87	: 3/ /87	: 3/30/87	: 3/26/87

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