

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS  
WASHINGTON, DC 20555

December 12, 1997

NRC INFORMATION NOTICE 97-87: SECOND RETROFIT TO INDUSTRIAL NUCLEAR  
COMPANY IR100 RADIOGRAPHY CAMERA, TO  
CORRECT INCONSISTENCY IN 10 CFR PART 34  
COMPATIBILITY

Addressees

All industrial radiography licensees.

Purpose

The U.S. Nuclear Regulatory Commission (NRC) is issuing this information notice to make licensees aware of a retrofit to the lock of the Industrial Nuclear Company (INC) Model IR100 Radiography Camera, to correct an inconsistency in 10 CFR Part 34 compatibility. It is expected that recipients will review the information for applicability to their licensed activities, and consider actions, as appropriate, to avoid problems. However, suggestions contained in this information notice are not NRC requirements; therefore, no specific action nor written response is required.

Description of Circumstances

The recent retrofit to the safety latch plate (NRC Information Notice 97-35, dated June 18, 1997), which corrected a scenario where the INC Model IR100 radiography camera would not pass the horizontal shock test, as required by 10 CFR 34.20, resulted in the equipment not meeting the requirement that the lock should not be easily removed by unauthorized personnel. INC and the State of California evaluated the problem, and INC took action to correct the situation.

Discussion

The "Safety Latch Plate" on the IR100 radiography camera has a potentially more "fragile area" (as specified in ANSI N432-1980, Paragraph 8.3.2) than the area previously tested. Apparently, if the Safety Latch Plate was struck directly on the front surface of the plate (with the source in the safe locked position), the plate could be deformed and deemed inoperable. It also appeared that the plate might be susceptible to damage if struck from the top and side. To ensure that this type of potential damage was not possible, a bumper that would prevent

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updated on 1/27/98



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deformation was welded to the back of the Safety Latch Plate, and the outer top edge of the plate was angled at a 45-to-50-degree angle, to a depth of approximately 3 mm (0.12 inch). The modified device was tested to ensure compliance with ANSI N432-1980, paragraph 8.2.

In the Safety Latch plate retrofit to the IR100, the Allen screws used to fasten the plate to the device were such that they were easily removed by the user. This is contrary to requirements in 10 CFR 34.20(a) which states that all devices in use meet the requirements of ANSI N432-1980. ANSI N432, Section 5.1.2.1, requires that "[t]he exposure device shall have a lock which is not easily removable by unauthorized personnel." To correct this situation, INC has modified the device design to secure the lock screws by placing a self-adhesive metal foil over the screws. The foil and adhesive are such that the foil is difficult to remove and cannot be removed and replaced without showing signs of damage. The foil will serve to inhibit unauthorized personnel from accessing the screws, and to provide a means to alert the licensee to possible tampering of the lock. INC has indicated that it will contact all owners of potentially affected cameras, on record with it, to notify them of the retrofit, and to retrofit the cameras for them or to provide them with the foil covers and instructions on retrofitting the devices. Attachment 1 contains a copy of the retrofit letter.

All affected cameras should be retrofitted as soon as possible. Licensees should contact INC, or the State of California, to obtain retrofit kits or assistance with retrofit procedures, or to report that they have not received their kits. Affected cameras may be checked for completed retrofits during any inspection.

This information notice 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.

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

Technical contacts: David Wesley  
Dept. of Health Services  
State of California  
(916) 445-1884

Michele Burgess, NMSS  
301-415-5868  
E-mail: mlb5@nrc.gov

Attachments: *Attachments filed in Folder*

1. INC Retrofit Letter
2. List of Recently Issued NMSS Information Notices
3. List of Recently Issued NRC Information Notices



**INC.**  
INDUSTRIAL NUCLEAR CO., INC.

OCTOBER 24, 1997

SUBJECT: IR-100 EXPOSURE DEVICE LOCK.

DEAR CUSTOMER:

ACCORDING TO TITLE 17 CCR 30332(C)(1) AND ANSI N432-1980, 5.1.2.1, EACH RADIOGRAPHIC DEVICE MUST HAVE A LOCK THAT IS NOT EASILY REMOVABLE BY UNAUTHORIZED PERSONNEL. IN OTHER WORDS ONLY KNOWLEDGEABLE OR AUTHORIZED PERSONNEL SHOULD DISMANTLE THE LOCK ASSEMBLY.

TO INSURE THE ABOVE REGULATION, INC WILL INSTALL A HEAVY DUTY FOIL LABEL OVER THE ALLEN SCREW ON THE LOCK BOX (RIGHT SIDE ONLY) THIS LABEL WILL STATE "TO BE REMOVED ONLY BY AUTHORIZED PERSONNEL.

INC WILL INSTALL THE LABELS FREE OF CHARGE ON EVERY DEVICE SHIPPED TO US FOR RELOADING OR MAINTAINENCE. IF WE DO NOT RECIEVE YOUR DEVICE WITHIN 120 DAYS FROM THE ABOVE DATE, WE WILL SEND YOU THE LABELS FOR YOU TO INSTALL.

THANK YOU FOR YOUR CONTINUED SUPPORT. IF YOU HAVE ANY QUESTIONS PLEASE CALL INC AT 1-800-711-1982.

VERY TRULY YOURS.

  
E. W. HUDDLESTON

**LIST OF RECENTLY ISSUED  
NMSS INFORMATION NOTICES**

<b>Information Notice No.</b>	<b>Subject</b>	<b>Date of Issuance</b>	<b>Issued to</b>
97-86	Additional Controls for Transport of the Amersham Model No. 660 Series Radiographic Exposure Devices	12/12/97	Registered users of the Model No. 660 series packages, and Nuclear Regulatory Commission industrial radiography licensees
97-75	Enforcement Sanctions Issued as a Result of Deliberate Violations of NRC Requirements	09/24/97	All U.S. Nuclear Regulatory Commission licensees
97-72	Potential for Failure of the Omega Series Sprinkler Heads	09/22/97	All holders of OLs or CPs for nuclear power reactors and fuel cycle facilities
97-65	Failures of High-Dose-Rate Remote Afterloading Device Source Guide Tubes, Catheters, and Applicators	08/15/97	All high-dose-rate remote afterloader licensees
97-64	Potential Problems Associated with Loss of Electrical Power in Certain Teletherapy Units	08/13/97	All U.S. Nuclear Regulatory Commission medical teletherapy licensees
97-61	U.S. Department of Health and Human Services Letter, to Medical Device Manufacturers, on the Year 2000 Problem	08/06/97	All U.S. Nuclear Regulatory Commission medical licensees, veterinarians, and manufacturers/distributors of medical devices
97-58	Mechanical Integrity of In-Situ Leach Injection Wells and Piping	07/31/97	Holders of and Applicants for Licenses for In-Situ Leach Facilities
97-57	Leak Testing of Packaging Used in the Transport of Radioactive Material	07/30/97	Suppliers and users of packaging for the transportation of radioactive material required to perform packaging leak tests

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97-85	Effects of Crud Buildup and Boron Deposition on Power Distribution and Shutdown Margin	12/11/97	All holders of OLs for pressurized-water reactors, except those licensees who have permanently ceased operations and have certified that the fuel has been permanently removed from the reactor vessel
97-84	Rupture in Extraction Steam Piping as a Result of Flow-Accelerated Corrosion	12/11/97	All holders of OLs for nuclear power reactors except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel
95-49, Sup. 1	Seismic Adequacy of Thermo-Lag Panels	12/10/97	All holders of OLs for nuclear power reactors
97-83	Recent Events Involving Reactor Coolant System Inventory Control During Shutdown	12/05/97	All holders of OLs for pressurized-water reactors, except those licensees who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel
97-82	Inadvertent Control Room Halon Actuation Due to a Camera Flash	11/28/97	All holders of OLs for nuclear power reactors

OL = Operating License  
 CP = Construction Permit

easily removable by unauthorized personnel." To correct this situation, INC has modified the device design to secure the lock screws by placing a self-adhesive metal foil over the screws. The foil and adhesive are such that the foil is difficult to remove and cannot be removed and replaced without showing signs of damage. The foil will serve to inhibit unauthorized personnel from accessing the screws, and to provide a means to alert the licensee to possible tampering of the lock. INC has indicated that it will contact all owners of potentially affected cameras, on record with it, to notify them of the retrofit, and to retrofit the cameras for them or to provide them with the foil covers and instructions on retrofitting the devices. Attachment 1 contains a copy of the retrofit letter.

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 Dept. of Health Services  
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Michele Burgess, NMSS  
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*Attachment filed in Jacket*

Distribution:

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