

Republic of the Philippines
PHILIPPINE NUCLEAR RESEARCH INSTITUTE
Department of Science and Technology
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INSPECTION AND ENFORCEMENT NO. 85-01

**LOSS / THEFT OF
RADIOGRAPHY DEVICES**

A. ADDRESSEES

All licensees authorized to use portable radiography devices.

B. PURPOSE

This information notice is provided as a notification of significant problems regarding the loss of radiography sources.

C. DESCRIPTION OF CIRCUMSTANCES

Three cases of loss of radiographic exposure devices with Ir-192 sources have been reported to PAEC over a period of 2 years, the last two in a brief span of less than one year. One case occurred during transport, two cases while on storage.

Case I

A 7.72 Ci Ir-192 source contained in radiographic projector in a shield/transport container was lost at the jobsite. Due to the distance of the jobsite from the temporary storage pit, the source was kept in "safe place". e.g., under the stairs, between use. The source was discovered missing for two days after its last use, and was reported to the PAEC days later. The source was never recovered.

Case II

A 24-Ci Ir-192 source contained in a radiographic projector, in a padlocked wooden box was lost when shipped from Cebu to Manila via a sea-going vessel. Investigations indicated that the shipment was probably lost at the shipping lines' warehouse. The loss was reported to PAEC only after several days of searching, without success. The projector was never found.

Case III

A 22-Ci Ir-192 source in a radiographic camera/projector was stored in a temporary storage pit near the radiographer' boarding house in Bauan, Batangas. The

storage pit was not provided with appropriate cover and security lock, and the prescribed radiation sign was not posted in the pit area. Within 24 hours after the discovery of the loss, it was reported to the PAEC and the local police. Junk shops nearby were alerted on possible attempt to sell the materials. The radiographic camera with the said source was recovered intact in Batangas City two weeks later.

D. DISCUSSION

All the cases resulted from lack of control of licensed materials. Such materials must always be under the control of the licensee and secured against unauthorized removal to assure that the health and safety of the public is protected.

Serious consequences to the public can be posed by the stolen sources, even when shielded; worse, should these become unshielded by tampering with the source lock by uninformed individuals. The source can also find its way in a scrap metal processor and become incorporated in construction materials of consumer items thereby potentially exposing many people to radiation. Such events should be avoided.

The principal cause of the cited incidents is the failure to properly train the radiographer in the radiation safety aspects of the licensee's operation. Licensee management is responsible for ensuring that employees receive proper training, particularly on the proper storage and security of radioactive sources.

In the second case, the licensee lost control of the licensed material by making the client company responsible in the shipment of the material from the jobsite to its home office. Such arrangements should be discouraged.

In two of the cases, the licensees did not comply with the license condition to report the incidents to the Commission "within twenty-four (24) hours from the time of its occurrence."

E. LICENSEE ACTION REQUIRED

Action required to all licensees involved in industrial radiography:

1. Examine the details of the radiation safety program and verify that procedures on the safe storage and transport are included and that these are implemented effectively;
2. Review and observe the provisions of the PAEC rules and regulations and Radioactive Material License conditions, specially on the timely reporting of lost or stolen materials;
3. The company's management should exercise control in all the activities involving the licensed radioactive materials e.g. control the receipt, possession and use of

radioactive materials. The management should take part in ensuring that license conditions, Commission's regulations and operating and emergency procedures are followed by radiographers and assistant radiographers.

No written response to this notice is required. If you need additional information, please contact the Department of Nuclear Regulations and Safeguards.

21 October 1985

BENITO C. BERNARDO

Chief, Department of Nuclear Regulations & Safeguards

APPROVED:

MANUEL R. EUGENIO

Commissioner