

Republic of the Philippines
PHILIPPINE NUCLEAR RESEARCH INSTITUTE
Department of Science and Technology
Address: Commonwealth Avenue Tel. No.: 929-60-11 to 19
Diliman, Quezon City Fax No.: 920-16-46

**NRLSD BULLETIN NO. 92-04 TRANSPORT ABROAD OF A DEPLETED
RADIOACTIVE SOURCE (RADIOGRAPHY)
IN A TRANSPORT CONTAINER DECLARED
TO BE EMPTY**

A. ADDRESSEES

All licensees who transport depleted* radioactive sources.

B. PURPOSE

This Bulletin is issued to inform licensees of a recent transportation incident that could have resulted in significant radiation exposures to workers and the public. The incident also serves notice to negligent licensees who utilize untrained and inexperienced freight forwarders and brokers.

C. DESCRIPTION OF CIRCUMSTANCES

In June 1991 a licensee secured from the **Institute** *Certificates of Transport (CT)* for 2 units of depleted Ir - 192 sources contained in separate source changers. The packages were to be shipped back to the supplier/manufacturer, Amersham, England. Upon verification of the compliance with radiation safety requirements, the **Institute** approved the packages and issued separate Certificates of Transport for each package. The CTs indicated that each package had a depleted Ir - 192 source, and that the corresponding radiation levels monitored on the packages were within acceptable limits.

The licensee, through its agent, shipped the packages by air transport to the consignee, Amersham of England. Upon arrival at Amersham, shipping documents stated that the packages were empty. However, actual verification by consignee showed that the packages contained radioactive materials as evident from the results of radiation level monitoring conducted. Amersham notified the **Institute** about their findings.

*Depleted - means the condition wherein the usefulness of the radioactive material for

a particular purpose can not be achieved.

D. DISCUSSION

A specific condition in a radiography license states that the transport of radioactive materials requires the issuance of a Certificate of Transport by the Institute. The CT indicates the radiation dose rates and the Transport Index (TI) on the package. The licensee is expected to attach this certificate to the shipping documents and reflected on the Air Way Bill.

Part 2 of the CPR requires that licensee shall comply with PNRI transport regulations and other applicable national and international transport regulations.

In the incident described in this Bulletin, the agent contracted by the licensee to facilitate the shipment of the package failed to reflect on the Air Way Bill the correct package information. Since the packages were declared empty, the usual precautionary measures were not enforced by the airline until it reached the consignee. The incident could have resulted in significant radiation exposures to workers and the public.

The incident described and the aforementioned discussions demonstrate the importance of doing the following:

1. Licensees who may be exporting radioactive materials are advised to review Institute regulations and are reminded of their responsibility to ensure proper packaging, labeling and other requirements concerning transport of radioactive materials.
2. Licensees returning shielded packages that do not contain radioactive material, especially those packages that incorporate depleted Uranium (DU) shielding as used in radiography, are cautioned that complete and accurate radiation surveys must be performed, and that a physical probe of the package may be necessary to verify that the package does not contain radioactive materials.
3. Licensees returning shielded packages should ensure that procedures/ instructions provided by the supplier/ manufacturer are strictly followed for properly verifying that packages are empty as well as for meeting restrictions on surface radiation levels.
4. Licensees are reminded of the need to evaluate incidents for their actual and potential safety consequences. Responsible individuals should review minor incidents for unexpected consequences and to determine if there are any requirements for reporting the incident to the **Institute**.
5. Licensees should have a means to ensure that necessary and pertinent documents related to the transport of radioactive material are complete and available. The

name, address, telephone number, telex number, authorized representative and responsibilities of each organization involved in the transport/handling should be kept by the licensees.

E. REQUIRED LICENSEE ACTIONS

In response to this bulletin, licensees who transport spent or depleted radiography source must:

1. Provide the Institute of the name, address, telephone number, telex number and authorized representative of different organizations involved in the transport of radioactive material;
2. Ensure that transport packages are correctly labelled with radioactive signs;
3. Ensure that transport packages are properly and correctly declared on transport documents;
4. Review their transport procedures and inform the Institute about any clarification to be made;
5. Maintain copies of the transport document for verification by the Institute.

F. COMPLIANCE SCHEDULE

Licensees shall inform the Institute of the actions taken to address this bulletin within sixty (60) days and comply with the specific regulatory provisions after receipt hereof.

July 29, 1992

Technical Contact:

OSROXZON L. AMPARO

Head, Standards Development Section
Nuclear Regulations, Licensing & Safeguards Division
Tel. No. 929-60-11 to 19, Loc. 227
96-73-43 Direct Line