

**GOVERNMENT OF INDIA
ATOMIC ENERGY
LOK SABHA**

UNSTARRED QUESTION NO:590
ANSWERED ON:28.07.2010
DISPOSAL OF NUCLEAR WASTES
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Will the Minister of ATOMIC ENERGY be pleased to state:

- (a) whether adequate arrangements have been made for the disposal of nuclear wastes from hospitals, research establishments and other sources in the country;
- (b) if so, the details thereof;
- (c) whether norms have been found to be over looked in the case of the incident of radiation emission from a scrap shop in Delhi recently;
- (d) if so, the details thereof;
- (e) whether the Government has taken any steps to check recurrence of such incidents in the country; and
- (f) if so, the details thereof and if not, the reasons therefor?

Answer

THE MINISTER OF STATE FOR SCIENCE & TECHNOLOGY AND EARTH SCIENCES (INDEPENDENT CHARGE), PMO, PERSONNEL, PUBLIC GRIEVANCES AND PENSIONS AND PARLIAMENTARY AFFAIRS. (SHRI PRITHVIRAJ CHAVAN):

(a) Yes, sir.

(b) The radioactive wastes generated from the hospitals, research establishments and other institutions are safely disposed off as per provisions of Atomic Energy (Safe Disposal of Radioactive Wastes) Rules, 1987. The radioactive sources used in these establishments are either sealed sources such as those used for radiotherapy or unsealed sources such as those used in nuclear medicine.

As per the requirement of Atomic Energy Regulatory Board (AERB), the sealed sources after they become unusable, have to be returned to the original supplier for disposal. For transport of these sources from user to supplier, authorization from AERB is needed to ensure safety during transport. Once the transport is complete it is necessary to inform AERB. In some cases, particularly when the source has been supplied long ago by a foreign supplier, it may not be possible to return it as required. In such cases, AERB helps the user for disposal of the source to an authorized waste management agency.

The unsealed sources used in medicine and research are mostly in liquid form, have short half-life and are used in small quantities. These sources after their use, are disposed off either by dilution and dispersion or are stored till their activity decays to an acceptable level for discharge. Unsealed sources with longer half-life need special attention for their disposal after use. Wastes containing such sources are diluted to levels below the authorized limits for disposal and discharged to the environment.

In all the above cases, authorization for disposal is required to be obtained from AERB as per the aforesaid rules.

(c) Yes, sir.

(d) The incident was caused by the unauthorized disposal of the gamma cell by Delhi University as scrap which violates the Atomic Energy (Safe Disposal of Radioactive Waste) Rules and Atomic Energy (Radiation Protection) Rules.

(e) Yes, sir.

(f) Several actions have been taken by AERB and DAE as well as other departments and ministries to prevent incidents like Mayapuri. Some of the steps taken are :

- # Installation of radiation detection systems at entry/exit of airports, sea-ports, inland container depots and other land ports.
- # Further efforts to bring legacy sources (which may have been in existence from periods when regulatory controls were still in the evolving stage) under regulatory control by scanning old records.
- # Updating the inventory of sources based on inputs from :
- # Ministry of HRD / UGC

Ministry of Health

Ministry of Industries

Coal Authority of India Ltd.

Oil and Natural Gas Commission

Source suppliers and

Response to advertisements issued in newspapers

Increase in the number of awareness programmes pertaining to radiation safety in various areas in the country. Members of scrap association have been sensitized to monitor the scrap for radiation. On May 6, 2010 AERB organized an awareness programme for scrap dealers and workers of Mayapuri scrap market. In this program, more than 150 participants were familiarized with the use of radiation monitors.

The requirement of pre-shipment inspection certificate for consignments imported to India declaring that they do not contain any type of hazardous, toxic waste, radioactive contaminated waste has been notified by concerned ministry.

Enhanced regulatory control by increasing frequency of inspections and establishment of Regional Centres by AERB.