WRITTEN ANSWERS TO UNSTARRED QUESTIONS

Nuclear waste management system

1551. SHRI RAMA CHANDRA KHUNTIA: Will the PRIME MINISTER be pleased to state:

(a) whether Government has any transparent Nuclear Waste Management System (NWMS);

(b) if so, the details thereof;

(c) if not, the reasons therefor; and

(d) the fresh steps taken by Government to have a balanced and transparent NWMS?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI V. NARAYANASAMY): (a) Yes, Sir, Government have a transparent Nuclear Waste Management System (NWMS) in place in various units of the Department of Atomic Energy.

(b) Nuclear waste in the form of gaseous, liquid and solid is generated during various activities of nuclear energy programme. The system for the management of various type of nuclear waste is as follows:

(1) Gaseous waste is treated at the source of generation. The techniques used are absorption on activated charcoal and filtration by high efficiency particulate air filter. The treated gases are then diluted with exhaust air and discharged through tall stack with monitoring.

(2) Liquid waste streams are treated by various techniques, such as filtration, absorption, chemical treatment, thermal and solar evaporation, ion exchange, reverse osmosis etc.

(3) Solid wastes are first subjected to volume reduction techniques such as incineration and compaction. The concentrate from treatment of gaseous, liquid and solid waste are immobilized in inert materials like cement, polymer and glass.

(4) Solid waste with low activity content is disposed in near surface engineered facilities such as reinforced concrete trenches, the tile holes and vault. Solid waste containing higher level of

radioactivity is stored in air-cooled facility for 30-50 years before their planned disposal in geological formation. The disposal facility is monitored through a systematic surveillance programme to ensure containment of radioactivity within controlled area.

In order to maintain transparency in NWMS, Department of Atomic Energy is adopting the following practices:

(i) Publication of safety codes and guides in the field of Nuclear Waste Management by Atomic Energy Regulatory Board. These publications are in open domain and are available on request.

(ii) Organisation of exhibitions on DAE programme in general and Nuclear Waste Management in particular during major conferences/symposium and other events.

(iii) Arranging out-reach programmes for public awareness in various parts of the country.

(iv) Arrangement of visits to Waste Management Facilities for the members of public living in nearby areas, school/college students & teachers, members of press/media, etc.

(v) Scientific publications in the field of Nuclear Waste Management in various National Journals by Scientists of DAE.

(c) Does not arise in view of (a) and (b).

(d) Efforts are continuously on to update and have a balanced NWMS. For example, extensive efforts in field of research and development are being made to develop new technologies in the field of nuclear waste management for the waste likely to be generated from newer reactor systems like advanced heavy water reactors and fast breeder reactors etc. Similarly, transparency in NWMS is being maintained through the measures explained in Answer to part (b) of the Question as above.

Findings for cancer treatment

1552. MS. MABEL REBELLO: Will the PRIME MINISTER be pleased to state:

(a) whether the Ministry funds cancer hospitals in the country which support primarily small projects and radiation related equipment for cancer treatment;