

**GOVERNMENT OF INDIA
ATOMIC ENERGY
LOK SABHA**

UNSTARRED QUESTION NO:2088
ANSWERED ON:09.03.2011
DISPOSAL OF NUCLEAR WASTE
Vinay Kumar Alias Vinnu Shri

Will the Minister of ATOMIC ENERGY be pleased to state:

- (a) whether the Government has formulated any effective plan for the disposal of nuclear waste; and
- (b) if so, the details thereof?

Answer

MINISTER OF THE STATE IN THE MINISTRY OF PARLIAMENTARY AFFAIRS, PERSONNEL, PUBLIC GRIEVANCES & PENSIONS AND PMO (SHRI V. NARAYANASAMY):

- (a) Yes Sir, the Government have an effective plan in place for the disposal of nuclear waste.
- (b) Nuclear waste in the form of gaseous, liquid and solid is generated during various activities of nuclear energy programme. The plan for management of various type of nuclear waste is as follows:
 - (1) Gaseous waste is treated at the source of generation. The techniques used are adsorption 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, adsorption, chemical treatment, thermal and solar evaporation, ion exchange, reverse osmosis etc.
 - (3) Solid wastes are first segregated and then subjected to volume reduction techniques such as incineration and compaction.
 - (4) The concentrate from treatment of gaseous, liquid and solid waste are immobilized in inert materials like cement, polymer and glass.
 - (5) Solid waste with low activity content is disposed in near surface engineered facilities such as reinforced concrete trenches, 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.