

GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
RAJYA SABHA
UNSTARRED QUESTION NO. 163
TO BE ANSWERED ON 08.12.2022

Disposal facilities for nuclear wastes

163 Shri M. Mohamed Abdulla:

Will the PRIME MINISTER be pleased to state:

- (a) whether it is a fact that geological disposal facilities have been adopted for the high-level radio active wastes, if so, the details thereof;
- (b) whether Government proposes to develop new initiatives for the safe disposal of nuclear wastes; and
- (c) If so, the details thereof and if not, the reasons therefor?

ANSWER

THE MINISTER OF STATE FOR PERSONNEL, PUBLIC GRIEVANCES & PENSIONS
AND PRIME MINISTER'S OFFICE (Dr. JITENDRA SINGH):

- (a) Yes Sir. India has opted for closed fuel cycle, where spent fuel is considered as a material of resource. Most of the useful components of spent fuel are recycled as fuel for future reactors. High Level Radioactive Waste generated during the recycling process is converted into vitrified glass through a process called vitrification. The vitrified waste is stored for an interim period in a Solid Storage Surveillance Facility. Internationally such waste are stored in geological disposal facilities as per International Atomic Energy Agency (IAEA) guidelines.
- (b) Yes Sir.
- (c) The technologies like partitioning of long lived radionuclides are being developed and implemented leading to reduction in waste volumes for disposal. This technology is also enabling recovery of specific radionuclides for societal application. With such advances, the need for Geological

Disposal Facilities will not arise in the near future. However, Research and Development activities involving laboratory scale characterisation for developing database on host rock characteristics, design and development of clay based engineered barrier system for use in disposal facilities, improved highly durable waste forms and computer coded development for simulation of long term evolution of waste disposal facilities has been undertaken.

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