

GOVERNMENT OF INDIA  
DEPARTMENT OF ATOMIC ENERGY  
**RAJYA SABHA**  
**UNSTARRED QUESTION NO.614**  
TO BE ANSWERED ON 27.06.2019

**PLAN TO MAKE USE OF NUCLEAR WASTES**

614. SHRIMATI SAROJINI HEMBRAM :

Will the PRIME MINISTER be pleased to state:

- (a) what are the various steps that have been taken and other new initiatives that have been planned to make use of the wastes being produced by Atomic energy plants in our country;
- (b) whether these initiatives are being used and implemented in the proper way so as to avoid the bad impact of these wastes on the living beings; and
- (c) if so, the details thereof?

**ANSWER**

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

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- (a) India has adopted "closed fuel cycle", where spent nuclear fuel is regarded as a material of resource. Closed fuel cycle aims at reprocessing of spent fuel for recovery of Uranium and Plutonium and recycling them back to reactor as fuel. This finally leads to a very small percentage of residual material present in spent nuclear fuel requiring their management as radioactive waste.

Safe management of radioactive waste has been accorded high priority right from the inception of our nuclear energy programme. High level radioactive waste also contains many useful isotopes like Caesium-137, Strontium-90, Ruthenium-106 etc. With the advent of new technologies based on partitioning of waste, emphasis is accorded to separation and recovery of these useful radio-isotopes so as to make use of the waste for various societal applications.

- (b) Yes Sir.
- (c) Initiatives/advancements w.r.t. partitioning of the waste have been implemented safely and successfully enabling recovery of useful radio-isotopes like Caesium-137, Strontium-90, Ruthenium-106 etc. and their deployment for societal applications. Utmost emphasis is given to waste

volume minimization, effective containment and isolation of radio-activity followed by near zero discharge of radioactivity to the environment. As a waste management philosophy, no waste in any physical form is released / disposed to the environment unless the same is cleared, exempted or excluded from regulations. A comprehensive radioactive waste management is established taking into account the operational capability for the management of radioactive waste and an independent regulatory capability for its overview. The nuclear waste management practices are at par with international practices following the guidelines of International Atomic Energy Agency.

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