GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
RAJYA SABHA
UNSTARRED QUESTION NO.161
TO BE ANSWERED ON 08.12.2022

Nuclear and radiation safety and nuclear security

161 Dr. Kanimozhi NVN Somu:

Will the PRIME MINISTER be pleased to state:

(a) whether Government has formulated any comprehensive plan to ensure nuclear and radiation safety and nuclear security including safety upgradation of old nuclear plants, if so, the details thereof;

(b) whether Government has any safety measures on management of spent fuel and nuclear waste particularly in Kalpakkam and Kudankulam Nuclear Power Plant in the State of Tamil Nadu, if so, the details thereof; and

(c) the amount spent on the development of infrastructure facilities around the local villages as part of Corporate Social Responsibility and other obligations?

ANSWER

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

(a) Yes, Sir.

Atomic Energy Regulatory Board (AERB) is mandated to frame safety policies, lay down safety standards & requirements, grant consent for all stages and monitor & enforce provisions under the Act and the Rules thereof, in nuclear installations and to enforce nuclear security aspects which have a bearing on safety within the Main Plant Boundary (MPB) of nuclear power plants. Nuclear Power Plants (NPPs) in India are licensed by AERB to operate after ascertaining their compliance with regulatory requirements for nuclear & radiation safety and nuclear security. All NPPs are required to undergo a comprehensive Periodic Safety Review (PSR) every ten years as per AERB requirements. During PSR, the safety of the plant is assessed considering cumulative effects of ageing, plant modifications, operating experience as well as comparison with the current safety standards/ practices, and necessary

safety upgrades are identified. Regulatory review of nuclear security aspects of Nuclear Projects is also being carried out at various consenting stages, starting from Siting, construction, commissioning and operating phase following the multi-tier review structure in AERB.

Highest priority is accorded to safety in all aspects of nuclear power viz. siting, design, construction, commissioning, and operation. Nuclear power plants are designed adopting safety principles of redundancy, diversity and provided fail-safe design features following a defence-in-depth approach. This ensures that there are multiple barriers between the source of radioactivity and the environment. The operations are performed adopting well laid out procedures by highly qualified, trained and licensed personnel. Appropriate Personal Protection Equipment (PPE) and monitoring aids are provided to all the personnel working in the nuclear power plants.

A multi-tier safety review mechanism within Nuclear Power Corporation of India Limited (NPCIL) and by the regulatory authority (Atomic Energy Regulatory Board- AERB) is in place. Based on these reviews and operating experience feedback, necessary upgrades are carried out and the nuclear power plants are maintained at state-of-the-art in terms of safety.

Adequate measures are in place to ensure the security of nuclear power plants. All operating nuclear power plants in the country are under security cover of Central Industrial Security Force (CISF) and integrated security systems including Electronic Surveillance Systems and Access Control mechanisms are in place to deter security breach. These systems are subjected to periodic audits & reviews and necessary upgrades are carried out based on the reviews and various inputs received from the central and state security agencies.

(b) Yes, Sir. Measures for safe storage and management of Spent Fuel and nuclear & radioactive wastes are in place at all nuclear power plant sites including Kalpakkam and Kudankulam in Tamilnadu.

After its use in reactor, spent fuel is kept in water-filled storage pools and is under continuous monitoring. In case of Kudankulam, as the fuel is under IAEA safeguards, security of stored spent fuel is also ensured by IAEA inspectors.

Spent fuel storage pools are designed as per AERB guidelines, which is in line with international regulatory practices.

(c) Since the implementation of CSR under the Companies Act 2013, Nuclear Power Corporation of India Limited (NPCIL) has so far spent about Rs. 663 crore on its CSR programmes, of which about 70% was incurred on development of infrastructure facilities in the villages around nuclear power plant sites. In addition, a special Neighbourhood Development Programme (NDP) for areas in the vicinity of Kudankulam site was implemented at a cost of Rs. 500 crore for infrastructure development (Rs. 200 Crore) and housing (Rs. 300 Crore).

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