

GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
RAJYA SABHA
STARRED QUESTION NO- 106
ANSWERED ON 05/12/2024

SAFETY OF NUCLEAR POWER PLANTS

*106. SHRI C. VE. SHANMUGAM

Will the Prime Minister be pleased to state:-

- (a) whether Government is aware that nuclear power plants pose great threat to human lives and property in case of leaks in the reactors etc.;
- (b) if so, the details thereof;
- (c) whether Government has taken adequate measures for the safety of the nuclear power plants in the country;
- (d) if so, the details thereof; and
- (e) further steps taken by Government in this regard?

ANSWER

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

(a) to (e) A statement is placed on the Table of the House.

Government of India
Department of Atomic Energy

STATEMENT REFERRED TO IN REPLY OF RAJYA SABHA STARRED QUESTION
NO.*106 (1ST POSITION) DUE FOR ANSWER ON 05.12.2024 BY
SHRI C. VE. SHANMUGAM REGARDING SAFETY OF NUCLEAR POWER PLANTS

- (a) & (b) Nuclear power plants are designed, constructed and operated adopting highest safety standards and the probability of leak of radioactivity is extremely low. Even in the highly unlikely event of leak of radioactivity in the public domain, emergency preparedness plans are in place to ensure that no major threat is posed to human lives.
- (c) Yes
- (d) 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 an overlapping defence-in-depth approach, in line with codes and guides of Atomic Energy Regulatory Board (AERB). Nuclear power plants are constructed to highest quality standards and the operations are performed adopting well laid out procedures by highly qualified, trained and licensed personnel. There is a robust regulatory mechanism of safety reviews at multiple levels. The safety of nuclear power plants is continuously monitored and reviewed by the AERB. A detailed emergency preparedness plan in line with the guidelines of the Atomic Energy Regulatory Board (AERB) is put in place at each of the nuclear power plant sites before start of their operation. Environmental Survey Laboratories (ESLs) of Bhabha Atomic Research Centre, established at Nuclear Power Plants (NPP) regularly monitor different environmental matrices around NPP sites and demonstrate compliance of regulatory limits stipulated by Atomic Energy Regulatory Board, ensuring safe operation of NPPs. The methodology adopted for radiological assessment is at par with international standard recommended by IAEA.
- Also, a twenty-year study, carried out by BARC, around NPP sites concluded that the public doses around NPPs are considerably below the regulatory limits, ensuring safe, efficient operations, and strict regulatory compliance. The findings are published in “Science of Total Environment”, a reputed international journal.
- (e) Safety is not static and improvements/ upgrades are effected in nuclear power plants based on evolving global standards, events and operating experience feedback.
