

Fines under Atomic Energy Act

2834.SHRI SANJIV KUMAR: Will the PRIME MINISTER be pleased to state:

- (a) whether it is a fact that the fines envisaged under section 30(3) of Atomic Energy Act is a mere ₹ 500;
- (b) whether it is also a fact that the quantum of fines were never revised since the enactment of the legislation in 1962;
- (c) whether the Ministry of Law thinks that quantum of fine is appropriate given the risks involved of infringement of the Act to human life and environment; and
- (d) the advice given by the Ministry of Law to the Department of Atomic Energy in this regard?

THE MINISTER OF STATE IN THE DEPARTMENT OF ATOMIC ENERGY (DR. JITENDRA SINGH): (a) and (b) Yes, Sir.

(c) The provision of fine of ₹ 500 under Section 30(3) of the Atomic Energy Act, 1962 is only in regard to minor administrative lapses. Special provisions pertaining to safety are provided under Section 17 of the Act. Contravention of any rules made under Section 17 (special provisions as to safety) shall be punishable with imprisonment for a term which may extend to five years, or with fine, or both. Other enforcement actions ranging from written warnings to withdrawal/suspension of the consent are also available to Atomic Energy Regulatory Board. The withdrawal of licence by itself is a very severe economic penalty and has the potential to seriously affect the financial health of the stake holder.

(d) The Atomic Energy Act, 1962, its subsequent amendments and rules framed thereunder have been promulgated after due consultation and concurrence of the Ministry of Law and Justice.

Disposal of nuclear waste

2835.SHRI ANIL MADHAV DAVE: Will the PRIME MINISTER be pleased to state:

- (a) whether department ensures proper disposal arrangements of nuclear waste, if so, the details thereof; and
- (b) the details of expenses incurred in nuclear waste management?

THE MINISTER OF STATE IN THE DEPARTMENT OF ATOMIC ENERGY (DR. JITENDRA SINGH): (a) Yes, Sir. Safe management of nuclear waste has been accorded high priority right from the inception of our nuclear energy program.

A comprehensive radioactive waste management is established based on safe operational experience for more than four decades, taking into account the operational capability for the management of radioactive waste and an independent regulatory over-review.

Management of nuclear waste in Indian context includes all types of radioactive wastes generated from entire nuclear fuel cycle and also from installations using radionuclides in medicine, industry and research. Utmost emphasis is given to waste minimisation, and volume reduction in the choice of processes and technologies adopted in radioactive waste management plants. Nuclear waste in the form of gaseous, liquid and solid is generated during operation & maintenance activities of nuclear power plants & radiochemical laboratories. The following are the nuclear waste treatment methodologies adopted depending on the nature of waste:

- (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.
- (2) Liquid waste streams are treated by various techniques, such as filtration, adsorption, chemical treatment, evaporation, ion exchange; reverse osmosis etc., depending upon the nature, volume & radioactivity content.
- (3) The radioactive solid wastes generated during operation and maintenance of nuclear power plants are segregated and volume reduced prior to its disposal. Disposal of waste is carried out in specially constructed structures such as reinforced concrete trenches and tile holes. Disposal system is designed based on multi barrier principle for ensuring effective containment of the radioactivity.
- (4) High level and alpha contaminated liquid waste from spent fuel processing and other radio metallurgical operations are immobilised in a suitable matrix (vitrification) and stored in an interim storage facility for initial cooling and surveillance prior to their eventual emplacement in geological disposal facility.

(b) The cost of waste management, including waste storage, at the nuclear power plant sites, is small and is a part of the Operation and Maintenance (O&M) cost of the plant.