

**GOVERNMENT OF INDIA  
ATOMIC ENERGY  
LOK SABHA**

UNSTARRED QUESTION NO:356  
ANSWERED ON:25.02.2015  
RADIOACTIVE WASTE DISPOSAL  
Roy Prof. Saugata

**Will the Minister of ATOMIC ENERGY be pleased to state:**

- (a) whether the Government has any long term radioactive waste disposal policy;
- (b) if so, the details thereof;
- (c) whether the Government is aware that the toxic air pollution increase the cancer risk; and
- (d) if so, the details thereof and the measures taken in this regard?

**Answer**

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

(a)&(b) 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 has been 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 overview.

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 gas, liquid and solid is generated during operation and maintenance activities of nuclear power plants, and radio-chemical 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 liquid waste arising out of spent fuel processing and other radio metallurgical operations are immobilised in a suitable glass matrix (vitrification) and stored in an interim storage facility for initial cooling and surveillance prior to their eventual emplacement in a geological disposal facility.

(c)&(d) It is not true that toxic air pollution has increased due to environmental discharge from nuclear facilities. All atmospheric discharges made to the environment are treated, filtered, monitored and accounted before discharge. Discharges to the environment from nuclear facilities, including that from Waste Management Facility, are much below the authorised limited for release to the environment.