

GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
LOK SABHA
UNSTARRED QUESTIONNO.3236
TO BE ANSWERED ON 23.03.2022

RADIOACTIVE RADIATION

3236. SHRI BHARTRUHARI MAHTAB:

Will the PRIME MINISTER be pleased to state:

- (a) whether high level of radioactive radiation emanating from nuclear waste causes a number of serious diseases such as skin problems, cancer, as well as radio vascular diseases;
- (b) if so, the details thereof along with the details of appropriate mechanism and safety measures adopted for safe disposal of the radioactive waste generated in the country;
- (c) whether the Government has taken note of reports of the presence of high alpha radioactive particles in various rivers near nuclear mining sites including Subarnarekha River which after passing through Jharkhand enters West Bengal and Orissa before falling into Bay of Bengal and thus pose health hazards to populace living alongside such rivers in the country; and
- (d) if so, the details thereof along the necessary corrective steps taken/proposed to be taken by the Government in this regard?

ANSWER

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

- (a&b) The radioactive waste generated from the nuclear facilities is well categorized, immobilized and stored in the waste storage facilities as per the stipulated guidelines of the regulatory agency i.e. Atomic Energy Regulatory Board (AERB). Regulatory guidelines are based on internationally accepted safe nuclear waste management practices. The radiation levels in such facilities are continuously monitored & maintained within the regulatory limits set by AERB. Such low-level radiation does not cause any health hazard diseases like skin problems, cancer, radio vascular diseases etc.

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. The radioactive solid wastes generated during operation and maintenance of nuclear facilities are segregated and volume reduced prior to its disposal. Disposal of these waste is carried out in specially constructed engineered modules such as reinforced concrete trenches and tile holes. These engineered structures are located both above and under-ground in access - controlled areas and are designed based on multi barrier principle for ensuring effective containment of the radioactivity. The areas where the disposal structures located are kept under constant surveillance with the help of borewells laid out in a planned manner by routinely monitoring the underground soil and water samples to confirm effective confinement of radioactivity present in the disposed waste. The practice is at par with international practices following the guide lines of International Atomic Energy Agency. Till date the surveillance of the disposal areas at different sites has confirmed the high degree of effectiveness of the disposal system for the containment of the disposed wastes. There has been no incident of release of radioactivity from such disposed wastes. No effect of radiation from the disposed wastes on the public or the environment has been observed.

(c&d) Yes, Sir. A detailed survey has been carried out on the levels of radioactivity in water and sediment samples, in the Subarnarekha River. The study clearly indicated that there is no increase of radioactivity in the river ecosystem above the background level.

The naturally occurring radioactivity levels in Subarnarekha River are extremely low and do not pose any health hazards to populace living alongside the river.

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