

**GOVERNMENT OF INDIA  
ATOMIC ENERGY  
LOK SABHA**

STARRED QUESTION NO:514  
ANSWERED ON:13.08.2014  
RADIATION LEVELS AROUND NUCLEAR PLANTS  
Chautala Shri Dushyant

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

- (a) the mechanism in place to monitor the radiation level around the nuclear plants in the country;
- (b) whether the Government has been undertaking periodic study of the radiation level around the existing atomic power stations?
- (c) if so, the details thereof and the outcome of the latest studies undertaken in respect of all operating plants in the country;
- (d) whether the water sources around the operating plants are also included in the study on radiation level and if so, the details thereof; and
- (e) the safety measures taken/being taken by the Government to check ill effects of radiations around nuclear plants?

**Answer**

THE MINISTER OF STATE FOR PERSONNEL, PUBLIC GRIEVANCES & PENSIONS AND IN THE PMO  
(DR. JITENDRA SINGH)

(a) The environmental monitoring around nuclear plants is carried out as per the guidelines from Atomic Energy Regulatory Board. Environmental survey laboratories (ESLs) are established at all atomic power station sites under Department of Atomic Energy (DAE) well before the commissioning of the reactor. ESLs carry out pre-operational survey around the plant site up to a distance of 30 km radius. This establishes the pre-operational baseline ambient radiation levels and radioactivity levels in the environmental matrices like air, soil, water, dietary products etc. around the site. During operational period of the reactor, environmental samples such as air, water, soil, vegetation, agricultural produces, milk, meat and other dietary products are collected periodically and analysed for radioactivity to assess the impact of operation of the plant on the surrounding environment and the public. ESLs are equipped with highly sensitive instruments and sufficient infrastructure to analyse extremely low levels of radioactivity in the environmental samples and the ambient radiation levels.

The radioactivity levels in environmental sample sand the ambient radiation levels are compared with pre-operational values. The radiological dose to the member of public is calculated as per the internationally accepted standard procedure. The results are submitted to Atomic Energy Regulatory Board.

(b) Yes, Sir.

(c) The studies carried out at the surroundings of all nuclear power station sites, for the last several years, have clearly indicated that there is no unacceptable build up of radioactivity in the environment. The additional annual dose to the general public are also negligibly low and far below the limits prescribed by AERB. These additional doses, attributable to plant operation, are a very small fraction of the dose due to natural background.

(d) Yes, Sir. Periodic water samples are collected around the surroundings nuclear power plants to assess the radionuclides concentration levels and radiological impact. The data collected since operation of the nuclear power plants in India has not shown any measurable increase over the base line data, thus providing an evidence that there has not been any impact on the environment due to operation of nuclear power plants.

(e) Epidemiological studies for the people living around operating nuclear power plants have been carried out by reputed local medical colleges in association with Tata Memorial Centre (TMC), Mumbai, a premier cancer research centre in the country. The studies have established that there has not been any rise in cancer morbidity, birth defects or any other ailments among the employees, who are at work or live in close proximity of nuclear power plants, in comparison to the national average.