

GOVERNMENT OF INDIA  
DEPARTMENT OF ATOMIC ENERGY  
**RAJYA SABHA**  
**UNSTARRED QUESTION NO.2173**  
TO BE ANSWERED ON 13.12.2012

**RADIATION ACCIDENTS IN ATOMIC POWER STATIONS**

2173. DR. T.N. SEEMA :

Will the PRIME MINISTER be pleased to state:

- (a) whether exposure to radiation atomic mishap/accidents has been happening in Atomic Power Stations and Nuclear plants in India;
- (b) if so, the details thereof and the number of workers affected by the radiation in last three years and the current year;
- (c) whether Government has conducted any inquiries in this regard;
- (d) if so, the outcome thereof;
- (e) the steps taken/being taken by Government to avoid such incidents in future; and
- (f) the details of the guidelines/rules which govern the amount of compensation in the event of an atomic mishap/accident?

**ANSWER**

THE MINISTER OF STATE FOR PERSONNEL, PUBLIC GRIEVANCES & PENSIONS AND PRIME MINISTER'S OFFICE (SHRI V. NARAYANASAMY) :

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- (a) to (e) There has been no radiation atomic mishap or accident in Nuclear Power Plants in India.

AERB has issued safety directive on the dose limits for occupational exposures. As per this directive, the cumulative effective dose limit for each consecutive block of five years shall be one hundred millisievert (100-mSv) for individual radiation workers. In addition, the annual effective dose to individual workers in any calendar year should not exceed 30-mSv. These limits are in-line with the recommendations of the International Commission on Radiological Protection (ICRP). These limits are very conservative as no adverse impact on health of workers is expected upto the radiation exposure of 1-Sv.

In order to have better control over individual exposures, AERB has specified investigation levels above which all the cases of individual exposures are to be investigated. These levels are as follows:

Monitoring Period	Exposure Level
1-month	10-mSv
3-months	15-mSv
1-year	20-mSv

The exposure cases above these levels are investigated by a Exposure Investigation Committee (EIC) constituted by Station. This Committee investigates genuineness of the reported exposure, investigates the causes of exposure; suggests remedial measures to prevent recurrence of such exposures and suggests further action in respect of work to be allocated to such exposed persons. The Committee recommends medical follow-up, if required, and assign doses for inclusion in the records. The report of EIC is submitted to AERB. Investigation of exposures exceeding 100-mSv is done by a Committee constituted by Chairman, SARCOP.

The details regarding investigation levels and the review mechanism are brought out in AERB Safety Manual on 'Radiation Protection for Nuclear Facilities' (AERB/NF/SM/O-2 Rev.4, 2005).

During the last three years and the current year, there was **no** case of individual exposure exceeding 100-mSv in five consecutive years at Indian NPPs (KGS). However, there were five cases of individual exposure exceeding annual limit of 30-mSv in a calendar year. It may be noted that these doses are too small to cause any detectable impact on the biological health of the workers, as established by international experience.

AERB undertook special regulatory inspections to investigate the circumstances that resulted in these exposures. Safety Review Committee for Operating Plants (SARCOP) of AERB reviewed the reports on investigation of these exposures and made recommendations to avoid re-occurrence of such events.

- (f) The amount of compensation for the workers in the event of an accident will be governed by the "Workmen's Compensation Act, 1923".

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