

(a) whether INSAT-IB satellite is dead for the last several months; and

(b) if so, the steps taken by Government to make it operational or to launch a new satellite?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTER OF STATE IN THE DEPARTMENT OF EDUCATION IN THE MINISTRY OF HUMAN RESOURCES DEVELOPMENT (PROF. M.G.K. MENON):

(a) No, Sir. It is expected that INSAT-IB will continue to be in operation till October, 1990 but with increased orbital inclination.

(b) INSAT-ID is scheduled to be launched in June, 1990 and will replace INSAT-IB.

[English]

Effect of Radiation on health of people

3116. DR. Y.S. RAJASEKHARREDDY:

Will the PRIME MINISTER be pleased to state:

(a) whether the total radiation dose in some of the country's atomic power stations had increased last year;

(b) if so, whether any assessment has been made of the effect of radiation on the health of people; and

(c) if so, the details thereof?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTER OF STATE IN THE DEPARTMENT OF EDUCATION IN THE MINISTRY OF HUMAN RESOURCE DEVELOPMENT (PROF. M.G.K. MENON):

(a) There has been an increase in the collective dose of radiation over the previous year in Tarapur, Rajasthan and Madras Atomic Power Stations. The collective dose of exposure at these three stations for the last 5 years is given below:

COLLECTIVE DOSE AT NUCLEAR POWER STATIONS DURING 1985-89

	<i>Tarapur (MANREM)</i>	<i>Rajasthan (MANREM)</i>	<i>Madras (MANREM)</i>
1985	2780	1484	552
1986	2374	1665	1100
1987	3043	1620	1737
1988	1605	974	1634
1989	1784	1759	1668

It will be seen from the above that the collective dose in 1989, though higher than 1988, is not significantly higher than the range in previous years.

(b) and (c). The total collective dose at a power station during a year depends on the operation of the power station and the extent and the nature of maintenance car-

ried out during the year. it is the sum total of the radiation doses received by all the workers exposed to radiation. In certain circumstances, where a large number of workers are involved, even though each receives radiation well below the permissible dose, the total collective dose can be higher. The individual doses of the workers have been within the limits prescribed for occupational workers and hence no observable health effects are expected. This is confirmed by the annual medical check-up at the hospitals located at the sites of the Nuclear Power Stations.

Allotment of land for Hotel in Orissa

3117. SHRI D. AMAT:
SHRI K. PRADHANI:

Will the PRIME MINISTER be pleased to state:

(a) whether Government of Orissa allotted land near Sun temple at Konark for the construction of a beach resort;

(b) if so, the details thereof including the names of the allottee;

(c) whether the land forms part of reserve forest; and

(d) if so, the reasons for making this allotment?

THE MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT AND FORESTS AND MINISTER OF STATE IN THE MINISTRY OF PROGRAMME IMPLEMENTATION (SHRIMATI MANEKA GANDHI):
(a) Yes, Sir.

(b) to (d). 28.49 hectares of land in Konark West Block, notified under Section 4 of Orissa Forest Act 1972 with an intention to constitute it as Reserve Forest, was denoti-

fied and allotted by Government of Orissa in favour of M/s East India Hotels Ltd. for development of beach resort.

Disposal of Nuclear Waste

3118. SHRI SHANTILAL PURUSHOTTAMDAS PATEL: Will the PRIME MINISTER be pleased to state:

(a) the estimated radio-active waste produced annually by each of the nuclear power plants in the country;

(b) the existing arrangements to dispose of the nuclear waste and how are these considered to be foolproof; and

(c) the details of major hazards from the nuclear waste when kept unsafe?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTER OF STATE IN DEPARTMENT OF EDUCATION IN THE MINISTRY OF HUMAN RESOURCE DEVELOPMENT (PROF. M.G.K. MENON): (a) Radioactive wastes are generated at different stages of nuclear fuel cycle viz. mining and milling, fuel fabrication, reactor operation and fuel reprocessing. Annual nuclear waste arising from power reactors of 1000 MWe capacity are estimated to be about 400 cubic meters of low and intermediate level solid wastes with bulk of the liquid wastes being of very low level activity amenable for discharge after treatment.

(b) All wastes are subjected to elaborate treatment and conditioning before they are stored on site in a safe manner and only such very low level wastes which are safe are discharged after making sure that they are well within the prescribed limits. Continuous environmental monitoring is also ensured in the vicinity of nuclear facilities to make sure that proper health and safety aspects are maintained.