

GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
LOK SABHA
UNSTARRED QUESTION NO.168
TO BE ANSWERED ON 09.07.2014

NUCLEAR FUELS

168. SHRI M.B. RAJESH:

Will the PRIME MINISTER be pleased to state:

- (a) whether the country is self-reliant on the availability of nuclear fuels domestically;
- (b) if not, the efforts being made to make the country self-reliant within the next twenty years;
- (c) the total number of uranium mines that have been made functional in the country;
- (d) whether such uranium mining has caused any health hazards in the mining areas; and
- (e) if so, the steps taken by the Government to ensure the safety of the people living near uranium mines?

ANSWER

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

- (a) No, Sir. Domestic availability of mined uranium is currently inadequate to meet the entire requirements of running of the existing nuclear power plants at full generating capacity.
- (b) Atomic Minerals Directorate for Exploration and Research (AMD) of the Department of Atomic Energy (DAE) has been carrying out extensive exploration for availability of uranium in the country. This effort has led to augmentation of the in-situ reserves of the uranium from 107268 tonnes to 204964 tonnes during the period April 2007 to March, 2014.

During the forthcoming years, augmentation of uranium production in the country will be carried out by:

- (i) Maximising production from existing facilities through Uranium Corporation of India Limited (UCIL) a Public Sector Undertaking functioning under the Administrative control of Department of Atomic Energy, and

- (ii) Setting up new production facilities in different parts of the country (Tummalapalle and Kanampalle in Andhra Pradesh (AP), Gogi in Karnataka, Kylleng Pyndensohing Meghalaya (KPM) in Meghalaya, Lambapur-Peddagattu in Telangana and Rohil in Rajasthan). Most of these units are expected to commence production in the next twenty years.

As the domestic uranium resources are inadequate, the DAE has envisioned a three-stage nuclear power programme. Under this programme, in the first stage, uranium based reactors are used to produce power and the spent fuel of these reactors is reprocessed to separate plutonium (a man-made fissile material produced in nuclear reactors using uranium) and the balance uranium for subsequent use, in the second stage of the programme, in Fast Breeder Reactors. Fast Breeder Reactors do not demand additional requirements of mined uranium and also multiply the nuclear fuel resource base by breeding plutonium. Once a sufficiently large nuclear installed capacity is created in the second stage, after a few decades, thorium, which is available in the monazite bearing beach sand of our country, will be utilised to maintain the then prevailing high nuclear generating capacity for a very long time.

- (c) Seven uranium mines are in operation in the State of Jharkhand; and one uranium mine at Tummalapalle in the State of Andhra Pradesh is close to commissioning.
- (d) No Sir. UCIL has been undertaking uranium mining and processing in line with well laid-out Health, Safety and Environmental Management Systems. Its adherence is monitored by in-house as well as external experts such as Bhabha Atomic Research Centre (BARC), Atomic Energy Regulatory Board (AERB) etc. External Medical experts team from Patna Medical College; Tata Main Hospital, Jamshedpur; BARC and UCIL have conducted health surveys around UCIL's facilities at Jaduguda area and have found no adverse impact due to uranium mining. The radiation environment is regularly monitored scientifically by the Health Physics cum Environment Survey Laboratory and it has been concluded that there is no health hazard because of UCIL's operations.
- (e) Does not arise in view (d) above.