

GOVERNMENT OF INDIA  
DEPARTMENT OF ATOMIC ENERGY  
**RAJYA SABHA**  
**UNSTARRED QUESTIONNO.484**  
TO BE ANSWERED ON 06.02.2020

**RADIATION TECHNOLOGY FOR SEWAGE TREATMENT**

484. SHRI V. VIJAYASAI REDDY:

Will the PRIME MINISTER be pleased to state:

- (a) whether it is a fact that Bhabha Atomic Research Centre (BARC) has developed a radiation technology for sewage treatment;
- (b) if so, the details thereof and where this technology has so far been demonstrated; and
- (c) the efforts being made to provide this technology to all rural and urban local bodies for sewage treatment thereby bring down human involvement?

**ANSWER**

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

- (a) Yes, Sir. Bhabha Atomic Research Centre (BARC) has developed radiation technology for treatment of municipal sewage.
- (b) This technology utilizes high energy gamma radiation from Co-60 gamma source for hygienizing dry sewage sludge. As a result of radiation treatment all pathogenic micro-organism in the sludge are brought to a level that they can't multiply further. The treated sludge is safe for human handling. Department of Atomic Energy(DAE) has setup a Technology Demonstration Plant "Sewage Sludge Hygienisation Plant" of 100 Ton/day capacity at Shahwadi, Ahmedabad under MoU with Ahmedabad Municipal Corporation (AMC), Ahmedabad. The Hygienised and Enriched Sludge (HES) from the plant is a rich source of micro nutrients and organic carbon and can be an efficient organic manure for horticulture and agricultural applications.

Subsequent to commissioning of the plant at Ahmedabad, Indore Municipal Corporation (IMC) has come forward to adopt the technology and civil work on the project has been initiated.

- (c) The developed radiation based dry sewage sludge treatment technology is being given wide publicity to the urban and rural local self-government institutions by presentations and meeting with the authorities responsible for the urban waste management, such as city municipal corporations. For example, technical meeting with Municipal Corporation of Pune has recently been conducted for publicity and implementation of the technology. In addition to this, dissemination of information and publicity of the radiation technology for dry sewage management is being carried out via publications of articles and through outreach programs.

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