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Sterilization plant for medical products ready to take off

Kavita Tate, Mumbai

MAHARASHTRA'S first and India's second Gamma radiation sterilization plant in the private sector, for radiation sterilization of medical products and spices coming up at Ambernath in Thane district of Maharashtra, will be ready for operations by the first week of November. The plant will be dedicated to the nation on November 16, 2005. The first such unit, Bikiran, was commissioned at Kolkata, in August 2004.

Commercial work at the plant would begin after obtaining the final clearance from the Atomic Energy Regulatory Board (AERB), said sources. The Rs 5-crore project is a joint venture between A V Processors and the Department of Atomic Energy's Board of Radiation and Isotope Technology (BRIT).

Speaking to Pharmabiz, Rajiv Adukia, Managing Director, A V Processors, said, " The plant is the result of MoU signed between our company and BRIT. It's a Gamma radiation facility for the sterilization of medical products and spices. BRIT will take care of all the technical aspects and operations of the plant. Also, BRIT will provide Cobalt 60, the source required for the radiation sterilization. The plant is situated at a plot of about 5000 sq. metres and the building area is about 1500 sq. metres. The capacity of the plant is about 1000 Kilocurie and it can be used for the processing of medium and high dose products."

"So far we have signed 14 MoUs with different organisations in the country. Similar such plants are established at Bangalore, Vadodara and New Delhi. Another plant, Vardan will take off soon at Haryana. This is the major step in the privatisation of the nuclear sector. The role of BRIT here would be to supply the Cobalt 60-source to these plants. We will help in selecting a site for the plant, commissioning the plant and Radiological Safety Officer (RSO) trained by BRIT and BARC will take care of safety of the plant," said BRIT chief executive J K Ghosh.

"All the other methods of sterilization like autoclave, sterilization by ethylene dioxide etc. have chance of contamination by the pathogens. Radiation sterilization is a very efficient and convenient technique for achieving a high level of sterility in medical supplies. Ionizing energy produced by gamma rays, penetrates deeply, making it fit for products with various densities and packaging types, such as pre-filled syringes. Radiation sterilization is a simple and safe process involving just an exposure of products to gamma radiation from a cobalt-60 source, for a predetermined time so as to receive a prescribed dose. The process is repeatable," explained Ghosh. "Also, packaging remains intact with Gamma processing. Since Gamma rays do not require high pressures or vacuum, seals are not stressed. In addition, Gamma radiation eliminates the need for permeable packaging materials," he added.

The plant will be used for the sterilization of medical products like plastic and rubber Eye/Ear dropper bottles, latex gloves, blood collection and donor sets, petri-dishes, contraceptive devices like Copper-T etc, absorbent cotton, wool, gauge, bandage, dressing, gauge pads, nappies, medical kits, metallic products like surgical sutures, shunt valves, aluminium caps, containers and tubes, surgical blades, needles, tools, implants etc. ◆