Radiation Technology for Cleaner India

Ahmedabad Municipal Corporation and Bhabha Atomic Research Centre sign MoU to set up a Sewage Sludge Hygienisation Plant at Ahmedabad.

On 21st April, 2015 India entered into a new era of utilizing advanced technology of Radiation Processing for Hygienising Sewage Sludge by signing of MoU between BARC and Ahmedabad Municipal Corporation. BARC will provide all technical and scientific support for setting up a 100 tons per day dry sewage sludge hygienisation Cobalt-60 Gamma Irradiation Plant at Ahmedabad. Large quantities of sludge is produced at various Sewage Treatment Plants and is disposed in an unorganized manner resulting in environmental pollution and spread of diseases. The sludge produced carries a heavy microbiological load and therefore its disposal has been a challenge to the urban development authorities. Bacterial counts including pathogens generally observed in sludge can vary between $10^5$ to $10^9$ per gram. Sludge also contains worms, ova, viruses, helminthes, weeds etc. It also contains toxic heavy metals and organic pollutants like pesticides, polyaromatic hydrocarbons, drugs and other persistent pollutants. Sludge is a rich source of many macro (Nitrogen, Phosphorous, Potassium), micro nutrients (Zinc, Iron, Copper, Manganese) and organic carbon essential for soil. If the sludge can be treated in an effective and economic way to meet the prescribed norms, it can be recycled by using it on land for various applications including agriculture. High energy gamma radiation from Cobalt-60 can kill pathogens, reduce odours and degrade organic chemical contaminants and thus making sludge safer for use or disposal. With this initiative of Ahmedabad Municipal Corporation and BARC, a beginning has been made to utilize advanced technology for hygienising sludge for cleaner India (Swachcha and Swastha Bharat).

The MoU was signed by Smt. D. Thara, Municipal Commissioner, Ahmedabad on behalf of Ahmedabad Municipal Corporation and Dr. K.L. Ramakumar, Director, Radiochemistry and Isotope Group on behalf of Bhabha Atomic Research Centre in the presence of Dr. Lalit Varshney, Head, Radiation Technology Development Division, Dr. G. Ganesh, Head, TT&CD and other senior officials from Ahmedabad Municipal Corporation, BRIT and BARC.

From left to right:- Shri C.R. Kharsan, Shri M. Thennarasan, Dr. Lalit Varshney, Smt. D. Thara, Dr. K.L. Ramakumar, Shri T.M. Lad, Smt. Darshana Patel and Shri Biren Raval