

## **AMRI's Radiation Therapy Machine in Safe Custody of Variable Energy Cyclotron Centre (VECC), Salt Lake, Kolkata**

The devastating fire at the AMRI hospital at south Kolkata on the wee hours of December 9, 2011 raised fear of radioactive leakage. AMRI hospital used a High Dose Radiation (HDR) therapy machine for cancer treatment. This machine was located at the basement of the annex building containing Iridium-192 sealed source of length 4.5 millimeter, diameter 0.9 millimeter and strength 2.8 Curie as on date.

Variable Energy Cyclotron Centre (VECC) is a premier research centre in Nuclear Science, Accelerator and Computer Technology in India under the Department of Atomic Energy (DAE). VECC is also one of the 18 Emergency Response Centres (ERC) under the DAE crisis management program. The devastating fire necessitated identification of the radioactive source and secure the same within a minimum response time. On December 9 in spite of repeated efforts even with personnel protective equipments, the team failed to access the basement due to excessive smoke, heat, water and darkness. Moreover, radiation survey results did not show any sign of radiation above the natural background.

On December 10, 2011 a team comprising scientists from VECC, Bhabha Atomic Research Centre (BARC), Atomic Energy Regulatory Board (AERB), Radiation Safety Officer of AMRI and representative of machine supplier located the HDR machine about 25 meters away from the staircase of the 4 feet water logged basement. With assistance from police and civil-defence personnel the machine weighing 250 Kg was shifted to VECC for safe storage. Radiation surveys were repeated at the hospital site on 10<sup>th</sup> and 14<sup>th</sup> December which did not show any sign of radioactive leakage.

Dr Srikumar Banerjee, Chairman, Atomic Energy Commission; Dr Rakesh Kumar Bhandari, Director, VECC and Dr A K Ghosh, Head, Health, Safety and Environment Group, BARC were always in touch with the team during the ``Search and Secure Operation``.

### **Members participated in the operation:**

Dr Tapas Bandyopadhyaya (VECC/BARC): coordinated at site

Shri R. Ravishankar, Smt M. Sengupta Mitra, Shri S K Mishra (BARC)

Shri Ranadhir Dey and Dr Surajit Pal (VECC)

Shri Biplab Sarkar (AMRI)  
Shri Iyer and Shri J. Tomas (AERB)  
Shri A K Pradeep, NECLEOTRON



Group of scientists involved for identification and recovery of radiation therapy machine from AMRI, Kolkata ( R to L : Dr Surajit Pal, Shri R Ravishankar, Shri S.K.Mishra, Smt M. Sengupta Mitra , Dr Tapas bandyopadhyay and Shri K. Sri Hari).