

RA10 New Research Reactor for Medical Isotope Production in Argentina

Argentina started the construction of a new 30 MW research reactor (RA-10), located at the Ezeiza Atomic Center (CAE), 40 km from Buenos Aires city. The RA-10 is conceived as a multipurpose facility suitable for radioisotopes production, materials and fuel irradiation, neutron techniques applications and silicon doping. The operation cycle is a 26 continuous days. The design is based on low enrichment uranium (LEU) Material Testing Reactor (MTR) fuel. The RA10 will replace the old 10 MW RA3 reactor, both operated by National Atomic Energy Commission (CNEA).

The weekly production of Mo-99 from fission will be increased from 900 6 days-Ci to 2500 6 days-Ci. Such expansion will put the CNEA in the ranks of large-scale producers of the global market. To reach this goal a construction license for a new radioisotopes production plant from fission by RA10 reactor is under consideration at Argentine Nuclear Regulatory Authority (ARN). During the purification process of the Mo-99, fission gases containing xenon are released into the atmosphere. The design of the production plant includes the improvement in engineering and devices necessary to minimize the noble gases emission. ARN use optimized discharges to calculate discharge values following the philosophy of ALARA concept.

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Track Classification: 2. Events and Nuclear Test Sites