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Criticality Safety and Burnup credit Analysis for MOX Fuel

Burnup credit is defined as the consideration of the reduction in reactivity associated with the use of the fuel in power reactors. Changes in the isotopic composition during fuel burnup which result in a reduced reactivity can be conveniently characterized by the reduction of the net fissile content, the build-up of actinides, the increase of the concentration of fission products, and the reduction of burnable absorber concentration where applicable. In practice, the conservative use of burnup credit requires consideration of all fissile isotopes, and allows consideration of any neutron absorbing isotopes for which properties and quantities are known with sufficient certainty[1].

The present research analyse the burn up and neutronic parameters of an assembly of MOX fuels. The disc
A typical compositions of low , medium and high Pu and the structure content can be found at reference [1
The results indicate burnup dependency of multiplication factor and local peaking factor, burnup depende

Country/ int. organization

Egypt/Nuclear and Radiological Regulatory Authority

Author: Mr IBRAHIM, Moustafa aziz (head of nucleae safety department)

Presenter: Mr IBRAHIM, Moustafa aziz (head of nucleae safety department)