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Management of the Storage and Transportation of PWR Spent Fuel Cask in Normal and Accident conditions

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MCNPX computer code is used to model the general cask GBC-32 which contain 32 typical PWR spent fuel assemblies. For Safe storage and transportation of the cask, factors that affect the criticality were studied using the concept of burn up credit. Several parameters such as initial fuel enrichment, fuel burnup, cooling time, and axial burnup profile were analysed. The analysis was performed in two different steps, first burn the fuel assembly at different burnup and storage conditions, secondly, incorporate the details of the assemblies into the cask and perform a criticality calculations for the cask. Several cases of unnormal storage conditions are considered. The results are compared with similar GBC-32 benchmark.

Do you wish to enter the YGE SFM19 Challenge?

Country or International Organization

Egypt

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