

# International Conference on Management of Spent Fuel from Nuclear Power Reactors: An Integrated Approach to the Back End of the Fuel Cycle



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## Major consideration and scenario development in safety assessment for interim spent fuel storage facility on Beyond DBA

Korea has 19PWR reactors and 4 PHWR reactors, and the storage capacities of spent nuclear fuel will become insufficient. Korea is performing the expansion project through high density storage rack, its trans-shipment to the adjacent reactor facility. Korea government has the plan to complete the construction of interim storage facility by 2024 for spent fuel management.

After Fukushima accident, the safety and integrity of spent nuclear fuel storage facility is more important. It is important to develop the various accident scenario consequences of different type spent fuel storage based on Fukushima Accident, that is Beyond DBA. Fukushima Nuclear power plant has three type spent fuel storage facility - on site wet-storage facility, off site wet-storage facility, dry storage facility. According to the storage type, the impact of earthquake and tsunami is different.

In this paper, it will be analysis and focus on the storage facility of spent nuclear fuel in Fukushima power plant. The on-site wet type storage facility of 1~4 Fukushima power plant, it will investigate the different reason on the impact of accident.

In addition, we have to take the provision and safety assessment for Beyond DBA like Fukushima accident, because Korea has the plan to construction interim spent fuel storage facility by 2024, Performing safety assessment, the major factors are the nuclide leakage radius for safety assessment, the damage rate of spent fuel, the extinction rate outside of plume in safety assessment by GoldSim Module.

The result of safety assessment is different about 2~10 times depending on the major factor above. So we have to discuss about this major considerations and develop this project after taking reliable data for safety assessment.

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