International Conference on Challenges Faced by Technical and Scientific Support Organizations (TSOs) in Enhancing Nuclear Safety and Security -IAEA CN-214

Contribution ID: 78

Type: Invited

Discussion of some new safety concepts and new safety requirements in light of the Fukushima Accident

Monday 27 October 2014 14:20 (20 minutes)

After Fukushima Nuclear Accident, some new safety concepts and new safety requirements are suggested and discussed among the nuclear industry and nuclear safety regulatory organizations all over the world. In this paper, new safety concepts and new safety requirements, such as "Design Extension Condition", "enhance the application of Defense in Depth", "independence between different levels of Defense in Depth", "enhance the diversity design of safety features", "safety level should be As High As Reasonable Achievable", and "practically elimination of large release of radioactive materials" are discussed; and also it is stated in this paper that, with the consideration of "safety level should be As High As Reasonable Achievable", deterministic and probabilistic methodologies should be used to identify the safety voluntaries in the design of NPPs, and reasonable practicable measures should be taken to minimize the consequence of residual risk, and to achieve the safety goal of practically elimination of large release of radioactive materials.

Country or International Organisation

China

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Track Classification: The role of TSOs in Relation to the Fukushima Daiichi Accident