

Study Group on Flooding and actions taken in response

Discussions in the Study Group on Flooding

From January to July in 2006, Nuclear and Industrial Safety Agency (NISA) and Japan Nuclear Energy Safety Organization (JNES) set up a study group on flooding to discuss the problem of design vulnerability to internal flooding of US nuclear power station and flooded seawater pumps of nuclear power station in India caused by the Indian Ocean off Sumatra. Federation of Electric Power Companies of Japan (FEPC) and each electric power company attended it as observer.

Deliberations in the Study Group on Flooding

It was assumed that the level of flood were the ground level plus 1 m continuously. Accordingly, it was inevitably resulted that water break into buildings through aperture and facilities such as power generators are submerged and lost their functions when buildings are flooded. However, the study was done only to confirm the influence of a flood in a particular case, without considering the possibilities and probabilities that such tsunami might occur.

Requests from NISA

Based on the result of the SGF, at a meeting on anti-seismic back-check plan, FEPC received a verbal instruction from NISA that “the tsunami can be evaluated (safety is maintained) by the method of Japan Society of Civil Engineers(JSCE). In cases that tsunamis of which height exceeds the height calculated by the method hit the power station, emergency seawater pumps installed at a lower level may lose their function and reactor cores may be damaged. Specific measures should be considered for power stations which have lower tolerances for the tsunami (tidal waves and backrush). (NISA did not talk about the cases where the buildings were flooded)”. FEPC was also told to inform the requests to the top managers of each electric power company. TEPCO shared the requests from NISA with the general manager of nuclear power and plant sitting division. However, the requests from NISA were not focused on the measures to prevent flooding of the buildings caused by tsunami as experienced last year.

The Assumption of the Height of Tsunami

NISA agreed upon evaluating the height of tsunami by the method of JSCE and reflecting it into anti-seismic back-checks judging the adequateness of the method. Therefore, TEPCO evaluated the tsunami height on the safety side by the method of JSCE and considered the safety of the power station was secured. In addition, since the wave source model needed to be developed based on the opinion of Headquarters for Earthquake Research Promotion and the results of the study on Jogan Tunami, TEPCO has been carrying out such actions as studying

the improvement of the watertight for emergency seawater pump generators, and requesting JSCE to revise the method of evaluation in parallel,.

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