

The Analysis of TRACE/PARCS in the Simulation of Ultimate Response Guideline for Lungmen ABWR

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Abstract : In this research, the TRACE/PARCS model of Lungmen ABWR has been developed for verification of ultimate response guideline (URG) efficiency. This ultimate measure was named as DIVing plan, abbreviated from system depressurization, water injection and containment venting. The simulation initial condition is 100% rated power/100% rated core flow. This research focuses on the estimation of the time when the fuel might be damaged with no water injection by using TRACE/PARCS first. Then, the effect of the reactor core isolation system (RCIC), control depressurization and ac-independent water addition system (ACIWA), which can provide the injection with 950 gpm are also estimated for the station blackout (SBO) transient.

Keywords : ABWR, TRACE, safety analysis, PARCS

Conference Title : ICNE 2014 : International Conference on Nuclear Engineering

Conference Location : Zurich, Switzerland

Conference Dates : January 14-15, 2014