

Plant Configuration Risk Assessment Methodology Development  
for Periodic Maintenance

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Abstract

As the operation experiences of nuclear power plants in Korea have been accumulated and the safety functions of nuclear power plants are getting enhanced, the role of stable and optimal operation of plant within the acceptable safety criteria becomes important nowadays. To accomplish such goal, maintenance and its related activities should be regarded as the most concerned issue. In terms of the risk concept including core damage frequency and unavailability, the cause that might impact plant safety during normal maintenance activities, can be identified and evaluated effectively. The plant configuration assessment methodology was developed to reflect the field experiences into risk calculation exactly within the limit of probabilistic methods. The plant configuration risk assessment methodology developed in this study consists of six steps and this method was applied to the reference plant. The operational risk was evaluated using maintenance records and the results were presented.