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Preliminary ROP Assessment for CANDU-6 with DUPIC Fuel

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Abstract

Preliminary assessments for regional overpower protection trip system of the CANDU-6 reactor with DUPIC fuel has been performed. For this study, some severe flux perturbation cases were selected, and the trip setpoint was calculated. In addition to the trip set point, some sensitivity studies for uncertainty of the channel random and common-random were performed. This study has shown that the trip setpoint of the DUPIC fuel core is slightly improved compared to the natural uranium fuel core with the same uncertainties of natural uranium core.