

Executive Summary for Topical Report
WCAP-18032-P, "Calculation of Mixed Core SLMCPR,
Supplement 1 to CENPD-300-P-A"
(Non-Proprietary)

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**Executive Summary - WCAP-18032-P/NP, Supplement 1 to CENPD-300-P-A,
“Calculation of Mixed Core Safety Limit Minimum Critical Power Ratio”**

The Westinghouse Electric Company LLC (Westinghouse) methodology for the calculation of Safety Limit Minimum Critical Power Ratio (SLMCPR) of Boiling Water Reactors (BWRs) was reviewed and approved by the NRC in the Westinghouse “Reference Safety Report for Boiling Water Reactor Reload Fuel,” CENPD-300-P/NP-A, July 1996. The approved methodology employs [

] ^{a,c} and also describes applications to mixed cores composed of different fuel types. This condition is encountered with a fuel supply transition from one vendor to another. In such cases, CPR correlations for some fuel products may be considered proprietary and withheld from use by the competing vendor, thus requiring special treatment for determining a cycle-specific SLMCPR value.

[

] ^{a,c}

With Supplement 1 to CENPD-300-P-A (WCAP-18032-P/NP), Westinghouse seeks to improve the mixed-core CPR calculations in order to produce a more consistent and conservative SLMCPR result.

[

] ^{a,c} The new formulation will allow for a consistent assessment of core CPR margin and a more straightforward licensing process regarding SLMCPR during fuel vendor transitions.

The topical report contains a description of a generic process for establishing a CPR correlation [

] ^{a,c} The topical report also includes a description and background of the currently approved calculation.

[

] ^{a,c}

In summary, approval is requested for an improved SLMCPR calculation process for mixed core applications. As part of the approval, any implementation of the new mixed-core SLMCPR calculation process will []^{a,c}

Additionally, if the D5 correlation is re-optimized []^{a,c}, approval is also requested for a bounding standard deviation error contribution []^{a,c} Values for other SLMCPR error contributions and/or other correlations derived with the method presented in WCAP-18032-P/NP will be provided to the NRC either as part of future license amendment requests for fuel transition, or through future supplemental reports.