



BWROG PERSPECTIVE ON CONTAINMENT ACCIDENT PRESSURE NPSHr ISSUES

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Regulatory Information
Conference 2011



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Background

NRC requested BWROG assistance to develop a method for CAP credit in ECCS pump NPSH analyses

January 2008: BWROG provided Licensing Topical Report (LTR) for CAP methodology

September 2009: NRC issued draft Safety Evaluation

Credit for CAP has become an issue, delaying NRC review of two EPU submittals

BWROG - ACRS Interface

BWROG presentations to ACRS on CAP:

- April 2010 ACRS Subcommittee
 - Summary of BWROG LTR
- May 2010 Full ACRS committee
 - Industry insight on potential for loss of containment

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NRC CAP Guidelines

March 2010: NRC published Draft Guidance Document on use of CAP

- Addresses the use of containment accident pressure to ensure adequate suction conditions for ECCS pumps
- Requires evaluation of uncertainty factors for ECCS pump operation at reduced NPSH margin

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BWROG – NRC Interface

January 2011 BWROG public meeting with NRC staff to discuss Draft Guidance Document

- Communicated BWROG positions on issues raised in the Draft Guidance Document
- Proposed a solution path to quantify NPSH uncertainty factors
- Established dialogue with NRC staff about how to resolve ECCS pump NPSH issues

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BWROG Activities

BWROG proposal to resolve issues raised in the NRC CAP guidelines

- Address NPSH concerns in Draft Guidance Document through use of CFD and other engineering analyses
- Current plan is to complete in Fall 2011

Final approval of LTR will provide a consistent method to apply CAP for BWRs

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Summary

BWROG supporting NRC efforts to resolve uncertainties about use of CAP in NPSH analyses

Effort to address the issues identified in the NRC Draft Guidance Document can be completed in 2011

BWROG supports restart of EPU reviews

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Acronyms

BWROG – Boiling Water Reactor Owners' Group

CAP – Containment Accident Pressure

CFD – Computational Fluid Dynamics

ECCS – Emergency Core Cooling Systems

EPU – Extended Power Uprate

NPSH – Net Positive Suction Head

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