

2005 Regulatory Information Conference
Session H1: Power Uprates

NRC Staff Perspectives on BWR Steam Dryers and Other EPU-Related Issues



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Background

- ! Cracking of RPV internals is a long-standing issue with BWRs
- ! Some BWRs are experiencing adverse flow effects during EPU operation
- ! Higher steam and feedwater flow are causing component failures due to flow-induced vibration and acoustic loadings

Safety Concern

- ! Safety concern is failure of steam dryer that can result in loose parts in the primary system
- ! High vibration levels can cause fatigue failure or wear affecting safety-related components
- ! BWRs with “square hood” steam dryers and high steam velocity currently considered most susceptible

NRC Staff Activities

- ! Evaluating plant-specific responses to EPU effects
- ! Carefully reviewing current EPU requests for consideration of flow effects
- ! Developing criteria for determining the acceptability of future EPU applications
- ! Communicating information on staff and industry activities
- ! Coordinating with RES on research activities to help understand adverse flow effects

Future Plans

- ! Review justification for returning Quad Cities to EPU operation
- ! Review bases for continued EPU operation of Dresden
- ! Monitor BWR Owners' Group activities to resolve EPU effects
- ! Determine need for generic communication
- ! Continue to communicate with licensees, ACRS, and public on EPU-related events and activities