

Enclosure 2

**Presentation Slides for Open Session
“Westinghouse Perspectives on Supporting the EPRI Alternate Licensing
Strategy (ALS) for Fuel Fragmentation, Relocation, and Dispersal (FFRD)”**

(Non-Proprietary)

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(8 pages including this cover page)

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Westinghouse Perspectives on Supporting the EPRI Alternate Licensing Strategy (ALS) for Fuel Fragmentation, Relocation, and Dispersal (FFRD)

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Significance of the Alternate Licensing Strategy

- Westinghouse views the EPRI alternate licensing strategy (ALS) as the most practical and efficient means of addressing phenomena related to fuel fragmentation, relocation, and dispersal (FFRD)
 - Accounts for the extremely low likelihood of occurrence for a postulated large-break LOCA (LBLOCA)
 - Alternative that does not require substantial amount of complex testing associated with fuel rod phenomena that occur post-rupture

Westinghouse Perspective on Interaction with 50.46

- EPRI ALS submittal intends to address consequences of FFRD for LBLOCA and non-pipe ruptures, including any impact on core coolability
- Supporting Westinghouse calculations intend to demonstrate that fuel dispersal will not occur for smaller break sizes via preclusion of cladding rupture
- EPRI ALS does not obviate the need for licensees to demonstrate compliance with the ECCS acceptance criteria
 - Licensing basis analyses would still be required to demonstrate compliance with 10 CFR 50.46

Method for Cladding Rupture Evaluation

- Current Methods
 - FULL SPECTRUM LOCA (FSLOCA) methodology
 - NRC-approved per WCAP-16996-P/NP-A, Revision 1
 - Limits on burnup and enrichment levels less than desired for high energy fuel designs under EPRI ALS
 - Incremental Burnup Extension
 - Currently under review per WCAP-18446-P/NP
 - Increased fuel rod average burnup limit but still less than desired
 - Developed a method for performing cladding rupture calculations
- The NRC-approved FSLOCA methodology and aspects of the incremental burnup extension will serve as the starting point for the method to predict cladding rupture supporting EPRI ALS

Modifications due to Higher Burnup / Enrichment

- Decay Heat and Kinetics Module
 - Update to cover full range of burnup and enrichment
- Transient Fission Gas Release
 - Refine modeling of fission gas release during a LOCA transient
- Pre-Burst Axial Fuel Relocation
 - Assess impact of pre-burst fuel relocation on LOCA transient response
- Cladding Rupture
 - Assess / update cladding rupture model as needed

Assessments and updates will be supported by experimental data

Questions

