

Post-Pilot Transition To NFPA 805 – Industry Perspective

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- Beaver Valley 1 - Westinghouse 911 MWe, 3 Loop PWR, 1976
- Beaver Valley 2 - Westinghouse 904 MWe, 3 Loop PWR, 1987
- Davis-Besse - 908 MWe, Babcock and Wilcox PWR, 1977
- Perry - 1268 MWe, General Electric, BWR 6 - Mark III, 1986

FENOC NFPA 805 Transition - Decision

- Opportunity to improve nuclear safety through a risk-informed fire protection program
- Potential to resolve industry legacy fire protection issues
- Standardize fleet approach to fire protection
- Use as leverage to improve PRA models and PRA staff capability

FENOC NFPA 805 Transition - Strategy

- Initial feasibility study conducted for each site
- Letter of intent sent December, 2005 to transition to NFPA 805
- Staggered implementation plan for all four units

Beaver Valley Transition

- Initial cost of \$7M with projected 2008 submittal
- Current cost of \$15.4M and projected 2010 submittal
- Unit 1 fire screen model complete; fire area modeling 70% complete
 - Ongoing rework
- Unit 2 fire screening model 30% complete
 - Unit 1 is pilot for Unit 2

Davis-Besse Transition

- Initial transition cost of \$3.2M is now projected at \$8.8M
- Fire screening model complete
- Focus on fire area modeling

Perry transition is scheduled to follow Davis-Besse

Key Industry Transition Issues

- Methods used to select modeling inputs
- Schedule overlap between pilot plants and post-pilot transition plants
- Our solution has introduced new challenges
- Cost benefit of NFPA 805 transition

Methods Used to Select Modeling Inputs

- Deterministic approach
- Unrealistic modeling outputs
- Results not comparable
- Existing standards have not been consistently applied

Schedule Overlap Between Pilot Plants and Post-pilot Transition Plants

- Lose benefit of pilot approach
- Substantial rework
- No fleet benefit
- Challenges limited resources

Our Solution Has Introduced New Challenges

- Deterministic approach
 - Manual operator actions
 - Circuit issues
- Risk informed approach
 - Adds HRA, fire ignition frequency, fire propagation challenges, etc.

Cost Benefit of NFPA 805 Transition

- Original assumptions are no longer valid
- Deterministic approach is gaining certainty
- Circuit analysis methods now developed
- Station modifications may cost less

Summary

- Risk-informed approach – good intention
- Still need to resolve open technical issues
- Front end transition plants intend to complete
- Follow-on plants are reevaluating positions