Industry Focus Group Activities Regarding the BTP 5-3 Issue

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Background

- In May 2014 the utility executives on the Materials Action Plan Committee (MAPC) requested the EPRI Materials Reliability Program (MRP) and BWR Vessel and Internals Project (BWRVIP) to jointly evaluate BTP 5-3 issue
- In Summer 2014 PWR Owners Group (PWROG) tasked Westinghouse to explore alternative approaches to addressing the BTP 5-3 issue
- A Focus Group was formed to coordinate and advise the MRP/BWRVIP and PWROG efforts to address the BTP 5-3 issue
- Continues the trend of increased cooperation / coordination between MRP and PWROG over the past several years
  - Increase efficiency and reduce duplication of effort

Focus Group Membership

- Focus Group consisted of:
  - Utility advisors
    - Representatives from SNC, FPL/NextEra, EXELON, ENTERGY, Dominion, Xcel Energy, TVA
  - Materials Reliability Program (MRP) and BWR Vessel and Internal Project (BWRVIP)
  - PWR Owners Group: Westinghouse, AREVA
  - GE Hitachi
- Three meetings to date
  - 11/5/2014, 1/15/2015, 2/18/2015

Focus Group Activities

- The Focus Group coordinated activities of the separate, independent projects
  - MRP/BWRVIP project on BTP 5-3
    - Evaluate conservatism of BTP 5-3 by comparison to available data
    - Quantify uncertainty associated with specific BTP 5-3 methods
    - Perform probabilistic fracture mechanics (PFM) analyses using FAVOR to assess risk significance of the potential non-conservatism and associated uncertainty
  - PWROG project on Material Orientation Toughness Assessment (MOTA)
    - Identify and quantify existing deterministic margin available in vessel integrity evaluation methods that compensate for potential BTP 5-3 uncertainty
  - PWROG project to address RIS 2014-11 by demonstrating that beltline P-T curves bound nozzles will also address implications of BTP 5-3 issue unique to nozzles

Overview

- Industry is providing three complementary presentations that address BTP 5-3 uncertainties and the associated margins
- The results will show the existing tools ensure acceptable reactor vessel integrity and continue to provide reasonable assurance for safe operation

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