

# Coatings

Resolution of NRC Review Issues

# Qualified Coatings ZOI Tests

- USA Jet Impingement Testing
  - Document to be submitted for information by July 15, 2006
  - Proprietary submittal
  - No plans/funding to support generic review
- Areva-FPL Jet Impingement Testing
  - Document to be submitted for information by July 15, 2006
  - Proprietary submittal
  - No plans/funding to support generic review

# EPRI OEM Coatings Data Use

- Licensees currently evaluating potential use(s) of test data
- Two potential uses of data are anticipated
  - Failure morphology (debris particle sizes)
  - Percentage of coatings failure

# Coatings Transport

- Licensees, and their screen vendors, who credit settling of coating debris will address NRC concerns about debris preparation, scaling, near field effect, and debris introduction

# Coating Assessment

- *“Recent observations of coating degradation at several facilities has caused the staff to question the adequacy of industry’s practice of performing visual coating assessments”*
  - Visual inspections have successfully identified degraded and failed qualified coatings
  - Licensees documented and prioritized these degradations based on their licensing basis that was in place at the time.
  - Visual inspection is not unique to coatings assessment
    - Utilized in other surveillance programs (e.g., ASME IWE/IWL & OM ISTD)

# Coating Assessment

- *“Coatings that exhibit visual signs of degradation most likely have been in a degraded state for an extended period, representing a potential source of debris in a design-basis accident (DBA)”*
  - Visual indications occur early in the degradation process, not as the terminal event
  - Visual inspection and corrective actions performed during scheduled outages provide reasonable assurance that coatings will function as designed

# Coating Assessment

- *“Appropriate physical testing of the coating systems could identify areas of degradation prior to visual manifestation of the problem”*
  - Physical testing is destructive
  - Random physical testing would not efficiently identify areas of defect or degradation
  - Current methods of visual inspection are more effective in identifying areas requiring further evaluation

# Coating Assessment

- To provide reasonable assurance that DBA qualified coatings will not fail during a DBA a one time evaluation will be performed
  - Four Plants, Four Major Coating Systems, same team
  - Visual Inspection and documentation review will identify coating test area
  - Will perform Elcometer adhesion testing during Fall 2006 outages
  - Determine that visually sound DBA Qualified coatings meet original adhesion criteria
- Physical testing of the containment coatings to provide assurance that the DBA qualified coatings will remain adhered in a DBA is currently utilized as determined by qualified evaluator on a case-by-case basis to evaluate the extent of the degraded condition
  - Alternatives to physical testing are determined where appropriate and include removal and accept as-is
- Individual licensees may assume 100% failure of the containment coatings and perform transport testing and strainer proof testing to ensure adequate head loss margin exists to account for the coating debris