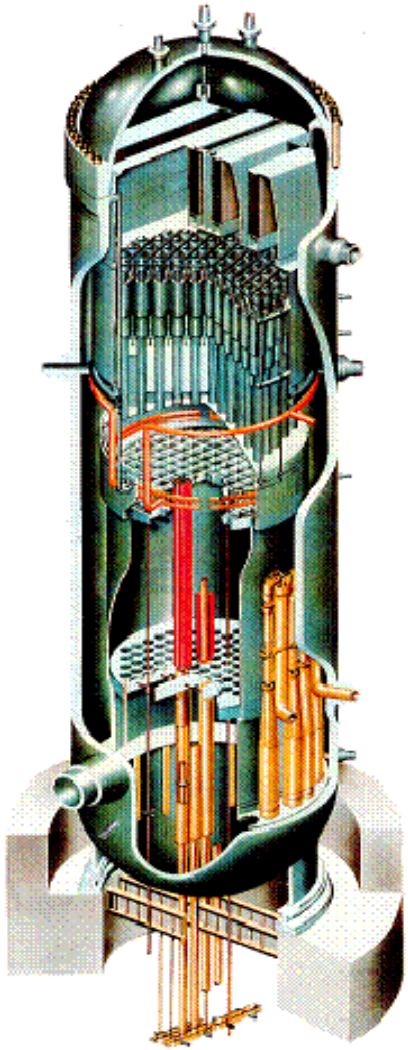

ELECTRIC POWER RESEARCH INSTITUTE

BWRVIP Actions to Assist Utilities in Demonstrating Steam Dryer Integrity

BWRVIP-NRC Meeting

NRC offices, Rockville, MD

9/27/2007

Contents

- Objectives
- Background
- Update on Status of BWRVIP Steam Dryer Activities
- Closed Session
  - Review of Draft BWRVIP Steam Dryer Integrity Guidance Document

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Objectives

- Provide Update on Status of BWRVIP Steam Dryer Activities
- Review content of draft BWRVIP Steam Dryer Guidance Document (Closed Session)
- Obtain feedback from NRC staff

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Background

- For the last three years BWRVIP has monitored industry efforts to develop steam dryer load definition/stress analysis methods
- A need for a standardized approach is recognized
- BWRVIP has initiated several activities to support utilities in demonstrating steam dryer integrity
  - BWRVIP-139 Steam Dryer Inspection and Flaw Evaluation Guideline
  - Revision to Section 4.0 of BWRVIP-06A Consideration of Loose Parts"
  - Steam Dryer Repair Design Criteria Report
  - Steam Dryer Integrity Demonstration Guidance Document
  - Steam Dryer Integrity Demonstration Methodologies Report

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Status of BWRVIP Steam Dryer Activities

- Develop Steam Dryer Inspection & Flaw Evaluation Guideline
  - BWRVIP-139 under NRC review, responses to NRC RAIs in preparation
- Revise Section 4.0 to BWRVIP-06A “Consideration of Loose Parts”
  - Under NRC Review, responses to NRC RAIs in preparation

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Status of BWRVIP Steam Dryer Activities

- Develop a Steam Dryer Repair Design Criteria Report
  - Provides general design acceptance criteria for permanent or temporary repair or replacement of steam dryers
  - Defines load types, combinations and stress allowables to be applied
  - Graded criteria based on power level and steam dryer inspection history
  - Report in preparation

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Status of BWRVIP Steam Dryer Activities

- Develop a Guidance Document for Demonstrating Steam Dryer Integrity for Power Uprate
  - Not methodology or vendor specific
  - Provides an overarching approach and criteria that must be met for acceptable compliance
  - Input provided by EPRI, vendors and BWRVIP utilities
  - Close coordination with current and near term Power Uprate applicants and BWROG
  - Meets Reg. Guide 1.20 recommendations
  - Report in preparation
  - Primary focus of today's review

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Status of BWRVIP Steam Dryer Activities

- Develop a BWRVIP Steam Dryer Integrity Demonstration Methodologies Report
  - Screening methodology to assess the potential for acoustic excitation in main steam lines (MSLs)
  - Method for defining steam dryer pressure loads based on MSL pressure measurements (derived from strain gauges)
  - Sub-scale testing methodology for predicting change in MSL pressures with flow velocity (power level)
  - Structural analysis methodology for defining steam dryer stresses
  - Report in preparation

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Status of BWRVIP Steam Dryer Activities

- Submittal schedule

BWRVIP Product	Planned Submittal Date
Responses to NRC RAIs on BWRVIP 139 and 06A	November 30, 2007
BWRVIP Steam Dryer Repair Design Criteria Report	December 20, 2007
BWRVIP Steam Dryer Guidance Document	December 20, 2007
BWRVIP Steam Dryer Integrity Demonstration Methodologies Report	March 31, 2008

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