



# Turbine Missile Probability Analysis and Maintenance and Inspection Program Description

NRC – ESBWR DCWG Meeting  
April 10, 2008



# Meeting Objectives

- Outline schedule for ESBWR Turbine Missile Probability Analysis
- Describe COL Applicants' plans to address COL Item on turbine maintenance and inspection program description



# Background

- DCD RAI 10.2-26 requested 2 COL Applicant Items:
  - Submit a turbine missile generation probability calculation
  - Describe the plant specific turbine maintenance and inspection program



# Proposed Turbine Missile Analysis Report Schedule


- Second Quarter 2009: Submit initial analysis to NRC, using bounding values for material properties
  - Analysis currently in progress
- Second Quarter 2013: Submit NAPS rotor material testing validation report to NRC
  - Validates material assumptions from bounding analysis
  - Will satisfy new ITAAC 2.11.4-1, Item 7 from RAI 14.3-176



# Maintenance and Inspection Program Description

- DCD describes program, with the exception of frequencies:

SRP Requirement	DCD Section
3.5.1.3 A.C. #2 – Identify intervals of rotor inspection	Tier 2, Section 10.2.3.6
3.5.1.3 A.C. #2 - identify inservice inspection intervals for main turbine steam valves	Tier 2, Section 10.2.2.7 and 10.2.3.7 – frequency of testing determined by missile probability analysis
3.5.1.3 A.C. #3 – Commit to appropriate inservice inspection/testing for life of the plant.	Tier 2, Sections 10.2.2.7, 10.2.3.6, 10.2.3.7
3.5.1.3 A.C. #3 Capability to perform examinations (Visual, MT, UT, PT) for inservice inspections	Tier 2, Section 10.2.3.5 and 10.2.3.6



# Maintenance and Inspection Program Description (cont)

SRP Requirement	DCD Section
<b>10.2 A.C. #1 – capability to test overspeed devices at power</b>	<b>Tier 2, Sections 10.2.2.4, 10.2.2.7, 10.2.3.7</b>
<b>10.2 A.C. #2 Inspection program for turbine valves established</b>	<b>Tier 2, Section 10.2.2.7, 10.2.3.7</b>
<b>10.2.3 A.C. #3 – Acceptable pre-service inspection program</b>	<b>Tier 2, Sections 10.2.3.5</b>
<b>10.2.3 A.C. #5 Acceptable inservice inspection program</b>	<b>Tier 2, Section 10.2.3.6</b>



# Maintenance and Inspection Program Description (cont)

- Conclusions:
  - New COLA Item requires the applicants to provide a program description.
  - The maintenance and inspection program description required by the SRPs is addressed in the DCD, with the exception of frequencies.
  - Thus, the COL Applicant will provide testing and inspection frequencies after the bounding missile probability analysis is complete to supplement the DCD description.
  - COLA will be revised in 2008 to commit to provide the bounding analysis and testing and inspection frequencies in second quarter 2009.



Questions?