US-APWR
Seismic and Structural Analysis Closure Plan

Introduction

March 29, 2012

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Mitsubishi Nuclear Energy Systems, Inc.

Purpose of Meeting

- Provide proposed additional resolutions for seismic and structural analysis, DCD Sections 3.7 and 3.8
- Provide the DCD completion plan including licensing information submittal plan for
  - ✓ Technical Reports
  - ✓ RAI Responses
  - ✓ DCD Markups

Introduction

- February, 2011
  - ✓ A US-APWR Seismic Task Force was established to address NRC Staff questions and RAIs related to DCD Sections 3.7 and 3.8
- March 31, 2011 Public Meeting
  - ✓ Twelve topics were scoped for key seismic and structural issues and Proposed Resolution Plans were presented
- June, 2011
  - ✓ Technical Reports revisions were submitted to NRC Staff, incorporating methodology changes outlined in March 31, 2011 Public Meeting

Introduction (cont.)

- September 22, 2011 Public Meeting
  - ✓ It was reported that SSI analyses challenges occurred as a result of the conservative path forward and following strategies were applied:
    1) Replace the time history (T/H) seed motion from “Northridge” to “Nahanni”
    2) Delete 2 soil profiles (8 profiles => 6 profiles)
    3) Add shear key in R/B complex
    4) Add Ballast in PS/Bs and A/B
    5) Use high density concrete in T/B
    6) Enlarge gaps between the buildings from 4” to 16”

Introduction (cont.)

- November, 2011
  - ✓ RAI raised an additional challenge to “Ground Motion Time History” which MHI replaced from “Northridge” to “Nahanni”
  - ✓ Subsequent to November 7th Public Meeting, additional refinements have been evaluated and are proposed to resolve final issues of US-APWR seismic and structural integrity

Introduction (cont.)

- Since November, 2011
  - ✓ A series of interactions have been held with NRC including RAI responses. Additional resolutions have been considered including
    1) Reinstate “Northridge” time history seed records
    2) Combine structures with a common basemat for NI and a common basemat for TI
    3) Remove shear keys and ballast structures
    4) Evaluate sliding stability using non-linear sliding stability analysis
- Today
  - ✓ Comprehensive resolution plan will be presented for seismic and structural analysis