

# US-APWR Seismic Topics Update Open Session

June 13, 2013

Mitsubishi Heavy Industries, Ltd.

Mitsubishi Nuclear Energy Systems, Inc.

# AGENDA



- NRC Discussion – Modified Subtraction Method **[OPEN]**
- R/B – T/B SSSI **[CLOSED]**
- Story Shear Values Comparison **[CLOSED]**
- Critical Sections **[OPEN]**
- Tier 2\* Information Identification **[OPEN]**



# R/B – T/B SSSI [CLOSED]

# Story Shear Values Comparison

## [CLOSED]

# Critical Sections

# Critical Sections



## ➤ Objectives:

- Provide update following consideration of NRC feedback on Critical Sections during the May 15<sup>th</sup> meeting
- Communicate the completion schedule for the related Design Reports and their availability for NRC Audit
- Communicate the completion schedule for the Critical Sections work

# Critical Sections



- **Additional Critical Sections to be included in the DCD**
  - From NRC Request for Additional Information (RAI):
    - Mass Reinforced Concrete (Cat. 5) connection to Steel-Concrete (SC) wall
    - Steel Structures with nonstructural concrete fill (Cat. 6) connection to SC walls
  - From NRC Meeting Feedback:
    - Primary Shield Wall, that includes RV support structure interface (unique 3-plate wall configuration)
    - SC Module Large Penetration
    - PCCV structure for fuel transfer tube penetration
    - Representative slab to wall reinforcing connection details
    - Other CIS structures being evaluated (unique configurations)

# Critical Sections



## ➤ Design Report Completion Schedule

- Design Reports for PCCV, Basemat, and Reactor Building (Includes PS/Bs and ESWPC) complete and available for audit at the end of July
- Design Report for CIS complete and available for audit at the end of September

## ➤ DCD Markups

- DCD Markups for Section 3.8 (except CIS) at the end of June
- DCD Markups for Appendix 3L (Critical Sections)
  - PCCV, Basemat, R/B Complex at end of July
  - CIS at the end of September

# Critical Sections



## ➤ Submittal Plan Supports Seismic Review Schedule

- The proposed schedules for providing the DCD markups, and the Design Reports allow for the staff review to continue per the schedule
- These proposed schedules provide opportunity for the staff to conduct Design Report audits starting in the August timeframe
- MHI requests NRC feedback that submittal plan supports Seismic Review Schedule

# Critical Sections



## ➤ Conclusions

- Critical Sections and selection approach were presented to the NRC on May 15<sup>th</sup>
- Additional Critical Sections have been selected in response to RAIs and feedback from the NRC meeting
- Selection approach and insights gained from the NRC meeting are being applied as detailed design products are being incorporated into the DCD

# Tier 2\* Information Identification

# Tier 2\* Information Identification



## ➤ Objective:

- To communicate the plan for the development of the criteria to be used for the identification of Tier 2\* information in DCD Section 3.8 and Appendix 3L

# Tier 2\* Information Identification



## ➤ Tier 2\* Identification Approach

- Focuses on defining key aspects of design data and information that is most significant to safety for the US-APWR design
- Tier 2\* information identified by other design centers is also being considered in making the US-APWR Tier 2\* selection determinations

# Tier 2\* Information Identification



## ➤ Submittal Plan Supports Seismic Review Schedule

- The identification of the Tier 2\* information:
  - DCD Section 3.8 submittal - July
  - DCD Appendix 3L submittal - July
  - CIS related information (DCD Section 3.8 and App. 3L) - September
- MHI believes the schedule for proposing Tier 2\* designated information is consistent with the NRC's review schedule and requests NRC feedback

# Tier 2\* Information Identification



## ➤ Conclusions:

- Tier 2\* information will be identified for DCD Section 3.8 and Appendix 3L
- Finalization of the Tier 2\* information is expected to require additional interactions with the NRC staff