

## **Enclosure 1**

**MFN 15-065**

### **GEH Response to Items:**

- #18b - Structural, Dynamic and Impact Analysis of New and Spent Fuel Racks,**
- #19 - Thermal Hydraulic Analysis of the Spent Fuel Racks and**
- #20 - Criticality Analyses of New and Spent Fuel Storage Racks**

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**NRC- Suggested Design Changes Item # 18b**

*Provide structural, dynamic and impact analysis of new and spent fuel racks (DCD Tier-2, 9.1.6.2 and 9.1.6.7)*

**GEH Response:**

The ABWR design shall be revised to eliminate the new fuel storage vault. The racks in the spent fuel pool will be utilized for storage of new fuel prior to loading into the reactor. Consequently, only the analysis for spent fuel racks needs to be considered. Because the structural, dynamic, and impact analysis of the fuel racks is highly dependent on the specific rack design, this item is more appropriately addressed as a COL Item. The DCD shall be updated to remove details related to the new fuel storage vault, and also to provide some additional detail related to the COL License Information Item for structural, dynamic, and impact analysis of the fuel racks.

**NRC- Suggested Design Changes Item # 19**

*Provide thermal-hydraulic analysis that evaluates the rate of naturally circulated flow and the maximum rack water exit temperatures (DCD Tier-2, 9.1.6.8).*

**GEH Response:**

Because the thermal-hydraulic analysis of the fuel racks is highly dependent on the specific rack design, this item is more appropriately addressed as a COL Item. The DCD shall be updated to remove details related to the new fuel storage vault, and also to provide some additional detail related to the COL License Information Item for thermal-hydraulic analysis of the fuel racks.

**NRC- Suggested Design Changes Item # 20**

*Provide criticality analyses of new and spent fuel storage racks (DCD Tier-2, Sections 9.1.6.1 and 9.1.6.3).*

**GEH Response:**

The ABWR design shall be revised to eliminate the new fuel storage vault. The racks in the spent fuel pool will be utilized for storage of new fuel prior to loading into the reactor. Consequently, only the analysis for spent fuel racks needs to be considered. Because the criticality analysis of the spent fuel racks is highly dependent on the specific rack design, this item is more appropriately addressed as a COL Item. The DCD shall be updated to remove details related to the new fuel storage vault, and also to provide some additional detail related to the COL License Information Item for criticality analysis of the spent fuel racks.

**Impact on DCD for Items #18b, 19 and 20:**

The following DCD Tier 1 and Tier 2 Subsections, Tables and Figures will be revised as a result of GEH's response to Items #18b, 19 and 20:

Tier 1:

- Subsection 2.5.6
- Subsection 2.15.3

Tier 2

- Subsection 1.2.2.6.5
- Subsection 1.2.2.6.6
- Subsection 3.1.2.6.2.2.1
- Subsection 3.1.2.6.3.2
- Section 9.1 (Extensive Changes)
- Subsection 9A.4.1.6.12
- Subsection 9A.4.1.6.39
- Subsection 9A.4.2.6.4
- Subsection 12.3.4.3
  
- Table 1.9-1
- Table 9.1-8
- Table 9.1-9
  
- Figure 1.2-11
- Figure 1.2-12
- Figure 9.1-14
- Figure 9A.4-7
- Figure 9A.4-8
- Figure 12.3-8
- Figure 12.3-9
- Figure 12.3-19
- Figure 12.3-20
- Figure 12.3-61
- Figure 12.3-62

The ABWR DCD R5 marked up pages are provided in Enclosure 2.