

## Response to SDAA Audit Question

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**Question Number:** A-4.3-3

**Receipt Date:** 04/10/2023

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**Question:**

Provide the core loading and operating conditions assumed when determining control rod worths. The assumed core loading and operating conditions should include, but are not limited to, the fuel enrichment distribution in the fuel assembly (both axially and radially across each fuel assembly batch), the core power level, temperature, moderator density, soluble boron concentration, and assumed control rod insertion. The impacts of reduced uranium enrichment blankets need to be included in the calculation as well.

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**Response:**

The pertinent core operating conditions associated with the individual control rod worths are provided in Table 1. Final Safety Analysis Report Figure 4.3-2 provides the core loading pattern. Figures 1 through 3 provide the corresponding fuel assembly radial fuel enrichment distributions on an one-eighth assembly basis. The equilibrium cycle does not assume axial blankets, so there is no axial variation of the fuel pin enrichment.

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}}<sup>2(a),(c),ECI</sup>

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Acronyms:

ARO all rods out  
BOC beginning of cycle  
EOC end of cycle  
GT guide tube  
HZP hot zero power  
IT instrumentation tube  
MOC middle of cycle  
PDIL power dependent insertion limits  
wt% weight percent

No changes to the SDAA are necessary.