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SUBJECT: Submits results of fuel assembly loading error evaluation involving fuel assemblies other than P8DPB289 in response to NRC request. Only change in critical power ratio due to rotated P8DPB289 is large enough to effect Cycle 5 limits.

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To: Tom Kevern (NRC)

March 19, 1980

From: Karl Meyer (ie: *KM*)

File: J-60a

One of the events that General Electric has traditionally evaluated in safety analysis reports and reload license submittals is the fuel assembly loading error. The current procedure (Ref. 1) is to report the results of only the limiting loading error event in the reload license submittal. Accordingly, the DAEC Reload 4 submittal included only the results of the rotated P8DPB289 bundle. During the review of reference 2, the NRC expressed concerns regarding loading error events involving fuel assemblies other than the P8DPB289.

For a reload license submittal, General Electric investigates loading error events for all the different types of fuel assemblies in that BWR core. This analysis is completed before a new assembly type is introduced into a core. The procedures for this analysis are described in references 3 and 4. As noted in reference 3, conservatism is built into the computational procedures.

For the Duane Arnold Energy Center, bundle loading errors have been investigated per the procedures described in references 3 and 4. These investigations were carried out for all bundle types in the cycle 5 core prior to the loading of that bundle type into DAEC. A survey of the results of these investigations shows that only the Δ CPR due to the rotated P8DPB289 is large enough to affect the Cycle 5 operating MCPR limits.

- Ref:
- 1) Generic Reload Fuel Application, NEDE-24011-P
 - 2) Supplemental Reload Licensing Submittal for Duane Arnold Energy Center, Reload 4, NEDO-24234, January 1980.
 - 3) Letter, R.E. Engel, GE to Darrell Eisenhut, NRC, "Fuel Assembly Loading Error," Nov. 30, 1977, MFN-457-77.
 - 4) Letter, R. E. Engel, GE to Darrell Eisenhut, NRC, "Fuel Assembly Loading Error," June 1, 1977, MFN-219-77.

JLR:jlk/1504
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