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AmerGen Energy Company, LLC, Docket No. 50-289, Three Mile Island Nuclear Station, Unit 1 (TMI-1), Dauphin County, Pennsylvania

Date of amendment request: January 16, 2003

Description of amendment request: The proposed amendment would revise the TMI-1 Technical Specifications to incorporate changes associated with the Cycle 15 core reload design analysis.

Basis for proposed no significant hazards consideration determination: As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed Technical Specification limits (Figure 2.1-1) and reactor protection system (RPS) trip setpoints (Table 2.3-1) are developed in accordance with the methods and assumptions described in NRC-[Nuclear Regulatory Commission] approved Framatome ANP Topical Reports BAW-10179 P-A, "Safety Criteria and Methodology for Acceptable Cycle Reload Analyses" and BAW-10187 P-A, "Statistical Core Design for B&W-[Babcock&Wilcox]-Designed 177 FA Plants." The core thermal-hydraulic code (LYNXT) and CHF [critical heat flux] correlation (BWC) have been approved for use with these methods and the Mark-B fuel type utilized at TMI Unit 1. The proposed Technical Specification requirements on Variable Low Pressure Trip (VLPT)

instrument operating conditions (Table 3.5-1) and surveillances (Table 4.1-1) are consistent with the VLPT requirements that were last contained in the TMI Unit 1 Technical Specifications prior to Cycle 7. The existing flux-flow trip setpoint and power/pump monitor trip have been shown to provide adequate DNB [departure from nucleate boiling] protection for Updated Final Safety Analysis Report (UFSAR) DNB-limiting loss of coolant events.

The margin retained for penalties such as transition core effects, by imposing a Thermal Design Limit of 1.40 in all DNB analyses supporting the proposed change, has been shown to be sufficient to offset the current mixed core conditions at TMI Unit 1, where the Mark-B12 fuel design with fine mesh debris filter is co-resident with earlier, non-debris filter Mark-B fuel designs. Therefore the previous commitment to require a higher minimum RCS [reactor coolant system] flow (105.5% of design flow instead of 104.5%) to offset transition core penalties is no longer necessary.

Reload cycles are designed and operated with maximum steady-state radial-local peaking factors that are bounded by UFSAR assumptions used to determine the dose consequences from fuel handling accidents.

The proposed change to Technical Specification 3.5.2.2.a is only an administrative correction.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed Technical Specification limits (Figure 2.1-1) and reactor protection system (RPS) trip setpoints (Table 2.3-1) provide core protection safety limits and Variable Low Pressure Trip setpoints developed in accordance with NRC-approved methods and assumptions. The transition core penalty resulting from Mark-B12 fuel with fine mesh debris filters co-residing with earlier, non debris filter Mark-B fuel has been demonstrated to be sufficiently bounded by the analyses supporting the proposed amendment. Therefore the previous commitment to require a higher minimum RCS flow (105.5% of design flow instead of 104.5%) to offset transition core penalties is no longer necessary. These changes have been evaluated for their impact on the design and operation of plant structures, systems, and components. These changes do not introduce any new accident precursors and do not involve any alterations to plant configurations, which could initiate a new or different kind of accident.

The proposed change to Technical Specification 3.5.2.2.a is only an administrative correction.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No.

The proposed reactor protection system (RPS) trip setpoints (Table 2.3-1) ensure core protection safety limits will be preserved during power operation. The proposed safety limits and setpoints are developed in accordance with NRC-approved methods and assumptions. The margin retained for penalties such as transition core effects, by imposing a Thermal Design Limit of 1.40 in all DNB analyses supporting the proposed change, has been shown to be sufficient to offset the current mixed core conditions at TMI Unit 1. The margin available between minimum DNBR [departure from nucleate boiling ratio] results for UFSAR loss of coolant flow events and the Thermal Design Limit of 1.40 is significant and is similar to DNB margin results for the current non-SCD [Statistical Core Design] analysis.

Reload cycles are designed and operated with maximum steady-state radial-local peaking factors that are bounded by UFSAR assumptions used to determine the dose consequences from fuel handling accidents.

The proposed change to Technical Specification 3.5.2.2.a is only an administrative correction.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

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Carolina Power & Light Company, et al., Docket No. 50-400, Shearon Harris Nuclear Power Plant, Unit 1, Wake and Chatham Counties, North Carolina

Date of amendment request: February 14, 2003.