



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 143 TO FACILITY OPERATING LICENSE NO. NPF-3
TOLEDO EDISON COMPANY
AND
THE CLEVELAND ELECTRIC ILLUMINATING COMPANY
DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1
DOCKET NO. 50-346

1.0 INTRODUCTION

In its letter dated January 4, 1988, the Toledo Edison Company (the licensee) requested an amendment to the operating license for the Davis-Besse Nuclear Power Station, Unit No. 1, to modify the wording in Section 3.9.1, Boron Concentration, of Appendix A to the license, Technical Specifications (TSs). The intent of the proposed changes in wording is to ensure that the TSs cannot be interpreted to state or imply that a specific borated water solution is required in the reactor coolant system (RCS) while the plant is in Mode 6 (Refueling) when there is no fuel in the reactor vessel.

2.0 DISCUSSION

The problem the licensee is proposing to correct arises because the present wording of the Limiting Condition of Operation (LCO) in Specification 3.9.1 effectively defines Mode 6 in its text as that operating condition when "... the reactor vessel head (is) unbolted or removed..." Moreover, the footnote associated with the statement of APPLICABILITY for TS 3.9.1 emphasizes this interpretation by stating that: "The reactor shall be maintained in Mode 6 when the reactor vessel head is unbolted or removed." This phrasing in TS 3.9.1 represents an incomplete definition of Mode 6; the full and complete definition of this operational mode is contained in Table 1.1 of the Davis-Besse TSs.

The licensee's proposed amendment would remove the present ambiguity regarding the definition of Mode 6 by eliminating from the text of TS 3.9.1, the phrase and footnote cited above. These words imply that the reactor is in Mode 6 whenever the reactor pressure vessel head is either unbolted or removed. This implication can be interpreted as requiring the licensee to maintain, per the

9001050149 891229
PDR ADOCK 05000346
P PDC

LCO both a specific reactivity level and a specific boron concentration in the water in all filled portions of the RCS and the refueling canal even for those times when there is no fuel in the reactor pressure vessel.

The proposed deletion from TS 3.9.1 of the phrase and footnote cited above would leave in Table 1.1 the complete definition of what constitutes Mode 6. In this table, the second footnote identifies as two of the conditions for being in Mode 6 that the ... "Reactor vessel head (is) unbolted or removed and fuel (is) in the vessel." (Emphasis added). This unambiguous definition of Mode 6 would then continue to require the licensee to maintain the present restrictions on reactivity level and boron concentration whenever the vessel head was unbolted or removed and fuel was in the vessel but not require these restrictions when there was no fuel in the reactor vessel. Clearly, there can be no concerns regarding the reactivity level if there is no fuel in the vessel. Accordingly, the net effect would be to remove from the Davis-Besse TSs, the interpretation that TS 3.9.1 requires any specific boron concentration in the RCS and the refueling canal when there is no fuel in the vessel.

3.0 EVALUATION

The need to establish the LCO in TS 3.9.1 requiring both a specific reactivity level and a specific boron concentration in all filled portions of the RCS and the refueling canal, is to ensure that the reactor will remain subcritical during all core alterations. The proposed word deletions in TS 3.9.1 do not modify this safety requirement. Accordingly, the safety of the plant during core alterations is unaffected. Moreover, the proposed deletions remove an ambiguity regarding the definition of Mode 6 thereby eliminating any need to maintain a specific boron concentration in the RCS or in the refueling canal when there is no fuel in the reactor pressure vessel. On this basis, the staff concludes that the proposed deletion of the phrase and footnote in TS 3.9.1 from Appendix A to the Davis-Besse operating license is acceptable.

4.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change to a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and a change to a surveillance requirement. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

5.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: M. D. Lynch

Dated: December 29, 1989