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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 67 TO FACILITY OPERATING LICENSE NO. NPF-3

TOLEDO EDISON COMPANY

AND

CLEVELAND ELECTRIC ILLUMINATING COMPANY

DAVIS-BESSE NUCLEAR POWER STATION, UNIT 1

DOCKET NO. 50-346

Introduction

By letter dated February 22, 1983, and modified by letter dated October 11, 1983, Toledo Edison Company (TED or the licensee) transmitted a Technical Specification Change Request to amend Appendix A of Facility Operating License NPF-3. The changes involve clarification of the Boration System heat tracing surveillance requirements, paragraphs 4.1.2.1, and 4.1.2.2, to alleviate an operational problem caused by the dual function of sections of boric acid addition piping between the Boric Acid Addition Tank (BAAT) and Reactor Coolant Makeup System. In addition, the licensee requested a minor rewording of paragraphs 3.1.2.8 and 3.1.2.9 to delete a redundant statement.

Evaluation

Concentrated boric acid solutions require protection from crystallization during storage and transfer, and Technical Specifications are in place to require such solutions to be maintained at or above 105°F. The 105°F specified is approximately 15°F above the crystallization point of 7wt% boric acid solution (13,125 ppmB), the upper concentration limit in the BAAT and transfer piping. Electrical heat tracing is used to maintain the temperature of the pipe at or above 105°F to prevent crystallization and assure free flowing of the concentrated solution. To assure operability of the heat tracing, Technical Specification Section 4.1.2.1 during Shutdowns (Modes 5 and 6) and Section 4.1.2.2 during Operations (Modes 1, 2, 3 and 4) require the weekly surveillance of the piping temperature to be $\geq$105°F. Boric acid solution with concentration of $\leq$ 5000 ppmB does not require heat tracing to prevent crystallization.

A section of boric acid addition piping between the BAAT and Reactor Coolant Makeup System functions as (1) a flow path for concentrated boric acid addition from the BAAT to the Makeup Tank and (2) a flow path at other times for addition of dilute boric acid solution from the Clean Waste Recovery System or demineralized water from the Demineralized Water Storage Tank to the Makeup Tank. When water or dilute boric acid solution at a normal temperature of 60-80°F is added to the Makeup System at high flow, the heat tracing is unable to maintain the line temperature required by Specifications 4.1.2.1 and 4.1.2.2. However, the high temperature is not required during and following transfers of dilute solution as crystallization of boric acid is not a problem.

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The licensee has proposed to modify Technical Specification paragraphs 4.1.2.1 and 4.1.2.2., Surveillance Requirements for Boration Systems, to permit the delay of the heat traced line temperature surveillance during periods when dilute boron solution ($\leq$ 5000 ppmB) or demineralized water is in the piping and temperature control to prevent boric acid crystallization is not required. The proposed Technical Specifications 4.1.2.1 and 4.1.2.2 would extend the weekly surveillance period whenever dilute solutions or water are being added and for 16 hours following the completion of the transfer. The change would allow eight hours for the piping temperature to return to $\geq$105°F and then an eight-hour period in which to make the surveillance.

We agree that this Technical Specification change does not decrease the safety at the facility since when water and dilute solutions are in the piping, heat is not required and when concentrated boric acid is transferred, it comes into the piping hot (approximately 135°F) and the piping temperature will be maintained $\geq$105°F.

TED also proposes that Technical Specification 3.1.2.8.a and 3.1.2.9.a be modified to delete the words, "and associated heat tracing," since the surveillance requirements for the heat tracing operability are already included in Specifications 4.1.2.1.a and 4.1.2.2.a. We agree that the heat tracing is a part of the boric acid system and its operability is required to be confirmed by Sections 4.1.2.1.a and 4.1.2.2.a; therefore, deletion of the words is acceptable.

Environmental Consideration

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR 51.5(d)(4), that an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

Conclusion

We have 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.

Dated: May 22, 1984

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