



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D. C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. _____ TO FACILITY OPERATING LICENSE NO. NPF-3

TOLEDO EDISON COMPANY

CENTERIOR SERVICE COMPANY

AND

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1

DOCKET NO. 50-346

1.0 INTRODUCTION

Generic Letter (GL) 89-19, "Request for Action Related to Resolution of Unresolved Safety Issue A-47," discussed that as a result of the NRC staff's technical resolution of Unresolved Safety Issue (USI) A-47, certain control system failures need protection, and that selected emergency procedures should assure that plant transients resulting from control system failures do not compromise public safety. As a result of this technical resolution, the NRC staff concluded that Pressurized Water Reactor (PWR) plants should provide automatic steam generator overfill protection, and that procedures and Technical Specifications (TS) should include provisions to periodically verify the operability of overfill protection and to assure that automatic overfill protection is available to mitigate potential main feedwater (MFW) overfeed events during reactor power operation.

2.0 EVALUATION

By letter dated March 20, 1990, Toledo Edison stated that the Davis-Besse Nuclear Power Station, Unit 1 (DBNPS) has in place a Steam and Feedwater Rupture Control System (SFRCS) trip on high Steam Generator (SG) level that closes the MFW isolation valves, the MFW control valves, the Main Steam Isolation Valves (MSIVs), and initiates Auxiliary Feedwater (AFW). The response further stated that the DBNPS Operating License Appendix A TS do not include the SFRCS SG high-level trip. By letter dated August 12, 1993, Toledo Edison committed to submit a TS change adding SFRCS SG high-level trip surveillance testing to the TS by December 17, 1993. By letter dated December 16, 1993, the licensee provided appropriate justification for not implementing their commitment to add overfill protection systems to the TS.

During the course of preparing the license amendment application and assessing the safety impact, the licensee determined that crediting this trip in the USAR was unnecessary because the USAR safety analysis already provided

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adequate protection for those accidents or transients where the SFRCS high-level trip is actuated. In USAR Section 15.2.10, Excess Heat Removal Due to Feedwater System Malfunction, the SFRCS SG high-level trip is referenced. However, the USAR specifically does not take credit for it.

The licensee has performed a review of the Probabilistic Safety Assessment (PSA) for specific DBNPS information associated with GL 89-19. This review showed that steam generator overfill protection is not a significant contributor to public health and safety. Also, plant-specific PSA risk insights show that steam generator overfill sequences are not significant within the context of the DBNPS Individual Plant Examination.

The SFRCS high-level trip is presently subjected to surveillance testing similar to the safety-grade SFRCS SG low-level trip and includes a channel check, channel functional testing and channel calibration. The high-level trip is tested by surveillance test procedures during the performance of the technical specification surveillance testing for the low-level trip. Based on the licensee's review of past testing, the SFRCS SG high-level trip has proven to be highly reliable.

The criteria of the NRC's Final Policy Statement on TS Improvements were also evaluated by the licensee. The Policy Statement delineates four criteria that establish the constraints on design and operation of nuclear power plants appropriate for inclusion in the TS required by 10 CFR 50.36. The licensee has concluded that it is not appropriate to incorporate its plant-specific SFRCS SG high-level trip into the TS.

3.0 CONCLUSION

In order to ensure the concerns in GL 89-19 on maintaining adequate provisions to periodically verify the operability of overfill protection, Toledo Edison will continue to perform surveillance testing of the SFRCS high-level trip in accordance with test procedures as noted above. On the basis of the above discussion regarding justification for not implementing TS change, the staff concludes that the addition of overfill protection system to TS is not necessary.

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