



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 66 TO

FACILITY OPERATING LICENSE NO. NPF-38

ENTERGY OPERATIONS, INC.

WATERFORD STEAM ELECTRIC STATION, UNIT 3

DOCKET NO. 50-382

1.0 INTRODUCTION

By application dated January 24, 1991, Entergy Operations, Inc. (the licensee) submitted a request for changes to the Waterford Steam Electric Station, Unit 3, Technical Specification (Appendix A). The requested changes would ensure that surveillance requirements accurately reflect the design characteristics of the installed Shutdown Cooling System (SDCS) suction line isolation valves. The current Technical Specification (TS) Surveillance Requirement 4.4.8.3.1.a requires that the Shutdown Cooling System suction line isolation valve be key-locked open in the control room at least once per 12 hours. The change would revise the surveillance test to require the isolation valve be verified open once per 12 hours. The staff's determination of no significant hazards consideration was published in the Federal Register on February 27, 1991, (56 FR 8221).

2.0 EVALUATION

The staff review of this issue has focused on the effect that the proposed change has on the ability to verify the SDCS suction line relief valves operability. The critical safety function served by these relief valves is to provide low temperature overpressure protection for the Reactor Coolant System (RCS) during heatup, cooldown, and during extended cold shutdown periods. The periodic valve lineup check imposed by the (TS) Surveillance Requirement 4.4.8.3.1.a ensures that the relief valves are not inadvertently isolated. We have reviewed the design characteristics of the shutdown isolation valves. Although the isolation valves are key-operated, they can only be locked closed, not locked open. This appears to be a conservative design condition because the ability to lock these valves closed provides assurance that the SDCS cannot be inadvertently placed into service. The ability to lock these valves open is undesirable because it would restrict system flexibility and the operators' ability to quickly isolate potential leaks.

3.0 EVALUATION

The current TS 4.4.8.3.1.a requires that suction isolation valves be verified to be key-locked open at least once per 12 hours. The intent of the requirement is to periodically verify proper alignment of the SDCS suction line relief valves by verifying open the suction isolation valves. Since the design configuration of the key-locked switch does not allow the key to be removed from the switch with valves in the open position, the staff agrees that the proposed revision to TS would accurately reflect the installed SDCS. The staff concludes that the proposed TS 4.4.8.3.1.a is acceptable.

4.0 EXIGENT CIRCUMSTANCES

The conflict with the TS, which would preclude shutdown operations as required for the refueling, was identified by the Senior Resident Inspector. The licensee's application for amendment dated January 24, 1991, requested issuance prior to the scheduled shutdown associated with the upcoming refueling outage. The licensee currently plans to enter Mode 4 on March 15, 1991, which will not allow the full 30 days for comments on the proposed action. A delay in issuing the amendment will, on the current refueling schedule, delay the licensee's ability to shutdown operations.

5.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION

The Technical Specifications under which the facility was licensed did not take credit for key-locked open Shutdown Cooling System Isolation valves in any accident previously evaluated. All assumptions and results for previously evaluated accidents remain unchanged by the amendment. The license amendment does not cause an increase in the probability or consequence of any previously evaluated accident.

The amended surveillance requirement still prompts a valve lineup check once per 12 hours. This valve lineup provides the necessary high degree of confidence in the ability of the SDCS suction relief valves to protect the reactor vessel from low temperature overpressure transients. Therefore, the amended Technical Specification surveillance requirement does not create the possibility of a new or different kind of accident from any accident previously evaluated.

No credit has been taken in any accident evaluation for the ability to lock open the SDCS suction line isolation valves. Operations with the valves "open" instead of "key-locked open" provides an increased margin of safety by providing the operational flexibility needed for timely response to SDCS casualties and avoidance of potential loss of shutdown cooling scenarios. The amendment does not affect any assumptions or results of the safety analyses, diminish the protection provided by any limiting condition for operation, or affect any bases, therefore, it does not involve a reduction in the margin of safety.

6.0 CONTACT WITH STATE OFFICIAL

In accordance with the Commission's regulations, the Louisiana State official was notified of the proposed issuance of the amendment. The State official had no comments.

7.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes in surveillance requirements. The NRC 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 the amendment involves no significant hazards consideration and there has been no public comment on such finding (56 FR 8221). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Section 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 the amendment.

8.0 CONCLUSION

The Commission 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Date: March 15, 1991