



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 112 TO

FACILITY OPERATING LICENSE NO. NPF-6

ENTERGY OPERATIONS, INC.,

ARKANSAS NUCLEAR ONE, UNIT NO. 2

DOCKET NO. 50-368

INTRODUCTION

By letter dated October 9, 1990, Entergy Operations, Inc. (the licensee) requested an amendment to the Technical Specifications (TSs) appended to Facility Operating License No. NPF-6 for Arkansas Nuclear One, Unit No. 2 (ANO-2). The proposed amendment would revise ANO-2 TS Table 3.6-1 to delete the exclusion of containment isolation check valves from Type C leakage tests.

Inspection Report 50-313/88-47, 50-368/88-47, and a clarification of notice of violation 313/8847-05, which the NRC staff provided in a letter dated June 22, 1990, identified inside containment isolation check valves that had not been Type C (local leak rate) tested, whereas Appendix J to 10 CFR Part 50 requires such testing. The proposed amendment to TS Table 3.6-1 deletes the # sign from the check valves listed in the table. This # sign annotates the valves as "not subject to Type C leakage tests."

EVALUATION

Section II.H. of Appendix J states, in part, that CIVs in the following category shall be Type C tested:

- "2. Are required to close automatically upon receipt of a containment isolation signal in response to controls intended to effect containment isolation;"

The staff's position is that the check valves listed in Table 3.6-1 of the TSs fall into this category. This is supported by the following two points.

First, check valves that are CIVs are considered to be automatic CIVs. GDCs 55 and 56 state that a containment penetration normally must have two CIVs, one inside and one outside containment, and each must be either a locked closed or an automatic isolation valve. It is further stated that, "A simple check valve may not be used as the automatic isolation valve outside containment." This implies that a check valve inside containment is an automatic isolation valve. This is stated explicitly in Regulatory Guide 1.141, "Containment Isolation Provisions for Fluid Systems," April 1978, which endorses the following definition in ANSI N271-1976/ANS-56.2, "Containment Isolation Provisions for Fluid Systems":

automatic isolation valve. A valve whose closure is initiated by automatic means without any action by a plant operator upon receipt of an isolation signal from a protection system; or a simple or positive acting check valve. (emphasis added)

Second, the check valves listed in Table 3.6-1 are the equivalent of valves "required to close automatically upon receipt of a containment isolation signal in response to controls intended to effect containment isolation" (to quote Appendix J). The definition from ANSI N271 above implies this equivalence. Also, the Appendix J definition quoted above is, in essence, the definition of an automatic containment isolation valve, which differentiates it from other types of isolation valves or valves which isolate on some other signal.

For example, although a Main Steam Isolation Valve (MSIV) in a PWR is a CIV which receives several automatic closure signals (such as steam line pressure-negative rate-high), the signals are not necessarily containment isolation signals, and the MSIVs are considered to be remote-manual CIVs in accordance with GDC 57. The important factor to consider is the function of the valve. If the valves were a different kind of automatic isolation valve, other than check valves, they would clearly require Type C testing. The mere fact that a check valve was used instead of, say an air-operated gate valve should not alter the testing requirement. In general, if one CIV in a penetration must be Type C tested, then logically the other CIV should be Type C tested. They are redundant barriers to leakage through a single potential containment atmosphere leak path.

Based on the above, the staff's position is that check valves are not excluded from Type C testing merely because they cannot receive a containment isolation signal. The design function of the check valve should be considered to determine whether the check valve is equivalent to a valve described in II.H.2 of Appendix J.

It should further be noted, however, that the ANO Unit 2 Technical Specifications currently state that certain check valves listed in TS Table 3.6-1 are not required to be Type C tested. This is apparently consistent with the review done for Unit 2 at the time of issuance of the original operating license. Nevertheless, the staff finds that the proposed amendment to delete the exception to Type C testing for containment isolation check valves correctly reflects Appendix J requirements. Therefore, the staff finds this change to TS Table 3.6-1 to be acceptable.

ENVIRONMENTAL CONSIDERATION

The amendment involves a change in 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 changes in surveillance requirements. 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 exposures. 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. 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.

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 the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: December 31, 1990

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