

December 31, 1990

Docket No. 50-368

Mr. Neil S. Carns  
Vice President, Operations ANO  
Entergy Operations, Inc.  
Route 3 Box 137G  
Russellville, Arkansas 72801

Dear Mr. Carns:

SUBJECT: ISSUANCE OF AMENDMENT NO. 112 TO FACILITY OPERATING LICENSE  
NO. NPF-6 - ARKANSAS NUCLEAR ONE, UNIT NO. 2 (TAC NO. 77833)

The Commission has issued the enclosed Amendment No. 112 to Facility Operating License No. NPF-6 for the Arkansas Nuclear One, Unit No. 2 (ANO-2). This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated October 9, 1990.

The amendment deletes the exclusion of Type C leakage tests for containment isolation check valves in ANO-2 TS Table 3.6-1.

A copy of our related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's next biweekly Federal Register notice.

Sincerely,

ORIGINAL SIGNED BY:

Sheri R. Peterson, Project Manager  
Project Directorate IV-1  
Division of Reactor Projects III, IV, and V  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 112 to NPF-6
2. Safety Evaluation

cc w/enclosures:  
See next page

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

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Sincerely,

A handwritten signature in cursive script that reads "Sheri R. Peterson".

Sheri R. Peterson, Project Manager  
Project Directorate IV-1  
Division of Reactor Projects III, IV, and V  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No.112 to NPF-6
2. Safety Evaluation

cc w/enclosures:  
See next page

Mr. Neil S. Carns  
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Arkansas Nuclear One, Unit 2

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

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ENTERGY OPERATIONS, INC.

DOCKET NO. 50-368

ARKANSAS NUCLEAR ONE, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 112  
License No. NPF-6

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Entergy Operations, Inc. (the licensee) dated October 9, 1990, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 2.C.(2) of Facility Operating License No. NPF-6 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 112, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license amendment is effective 30 days after its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

*Theodore R. Quay*

Theodore R. Quay, Director  
Project Directorate IV-1  
Division of Reactor Projects III, IV, and V  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: December 31, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 112

FACILITY OPERATING LICENSE NO. NPF-6

DOCKET NO. 50-368

Revise the following page of the Appendix "A" Technical Specifications with the attached page. The revised page is identified by Amendment number and contains vertical lines indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

REMOVE PAGE

3/4 6-21

INSERT PAGE

3/4 6-21

TABLE 3.6-1 (Cont.)CONTAINMENT ISOLATION VALVES

<u>PENETRATION NUMBER</u>	<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>ISOLATION TIME (SEC)</u>
C. MANUAL (Cont.)			
2C3	2CV-5432#	Fuel Transfer Tube Isolation (outside)	N.A.
D. OTHER (Check Valves)			
2P9	2N <sub>2</sub> -18	H.P. Nitrogen to SI Tanks (inside)	N.A.
2P39	2CVC-78	Quench Tank Makeup & Demin Water Supply (inside)	N.A.
2P40	2FS-37	Fire Water Isolation (inside)	N.A.
2P41	2N <sub>2</sub> -1	L.P. Nitrogen Supply Isolation (inside)	N.A.
2P43	2SA-69	Service Air Supply Isolation (inside)	N.A.
2P46	2BA-216	Breathing Air Supply Isolation (inside)	N.A.
2P51	2AC-49	Chilled Water Supply Isolation (inside)	N.A.
2P52	2CCW-38	CCW to RCP Coolers Isolation (inside)	N.A.

# Not subject to Type C leakage tests.

\*May be opened on an intermittent basis under administrative control.



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

Principal Contributors: J. Pulsipher  
S. Peterson