



Entergy Operations, Inc.
1448 S.R. 333
Russellville, AR 72802
Tel 479-858-4888

Jeffery S. Forbes
Vice President
Operations ANO

2CAN020601

February 14, 2006

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

SUBJECT: License Amendment Request
To Modify Technical Specification Surveillance Requirement 4.6.1.1.a
Arkansas Nuclear One, Unit 2
Docket No. 50-368
License No. NPF-6

Dear Sir or Madam:

Pursuant to 10 CFR 50.90, Entergy Operations, Inc. (Entergy) hereby requests the following amendment to the Arkansas Nuclear One, Unit 2 (ANO-2) Technical Specifications (TSs). The proposed change will modify the ANO-2 TS Surveillance Requirement (SR) 4.6.1.1.a. Specifically, the proposed change will eliminate the requirement to verify containment isolation valves that are maintained locked, sealed, or otherwise secured closed from the monthly position verification. The proposed change will result in reducing radiological exposure to Operations, Health Physics, and Security personnel.

The proposed change will reflect the wording that is included in NUREG-1432, *Standard Technical Specifications Combustion Engineering Plants*, Revision 3.1, SR 3.6.3.3 and SR 3.6.3.4 with consideration for the difference in TS format. NUREG-1432 reflects Technical Specification Task Force (TSTF) Improved Standard Technical Specification Change Traveler No. 45 (TSTF-45-A) which was approved by the NRC on July 26, 1999.

The proposed change has been evaluated in accordance with 10 CFR 50.91(a)(1) using criteria in 10 CFR 50.92(c) and it has been determined that this change involves no significant hazards consideration. The bases for these determinations are included in the attached submittal.

The proposed change does not include new commitments.

Entergy requests approval of the proposed amendment by December 31, 2006. Once approved, the amendment shall be implemented within 60 days. Although this request is neither exigent nor emergency, your prompt review is requested.

A001

If you have any questions or require additional information, please contact Dana Millar at 601-368-5445.

I declare under penalty of perjury that the foregoing is true and correct. Executed on February 14, 2006.

Sincerely,



JSF/DM

Attachments:

1. Analysis of Proposed Technical Specification Change
2. Proposed Technical Specification Changes (mark-up)

cc: Dr. Bruce S. Mallett
Regional Administrator
U. S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011-8064

NRC Senior Resident Inspector
Arkansas Nuclear One
P. O. Box 310
London, AR 72847

U. S. Nuclear Regulatory Commission
Attn: Mr. Drew Holland
MS O-7D1
Washington, DC 20555-0001

Mr. Bernard R. Beville
Director Division of Radiation
Control and Emergency Management
Arkansas Department of Health
4815 West Markham Street
Little Rock, AR 72205

Attachment 1

2CAN020601

Analysis of Proposed Technical Specification Change

1.0 DESCRIPTION

This letter is a request to amend Operating License NPF-6 for Arkansas Nuclear One, Unit 2 (ANO-2).

The proposed change will revise the Operating License to modify the ANO-2 Technical Specification (TS) Surveillance Requirement (SR) 4.6.1.1.a. Performance of the SR ensures the manual valves, blind flanges, or deactivated automatic valves located in containment penetrations that are required to be closed during an accident condition are secured in their closed positions. The SR is performed at least every 31 days. The SR is modified by a note (*) that allows excluding verification of the valves located inside containment that are locked, sealed, or otherwise secured in the closed position and includes a SR to perform a check of the inside containment isolation valve positions prior to entering Mode 4 from Mode 5 if not performed in the previous 92 days. The proposed change will modify SR 4.6.1.1.a to specifically exclude locked, sealed, or otherwise secured closed valves that are located outside containment from the monthly verification. A new SR (SR 4.6.1.1.d) will be added that will reflect the surveillance requirement for similar devices located inside containment. In addition a new note will be included that will allow verification of the valves and blind flanges that are located in high radiation areas by use of administrative means.

The proposed change reflects the wording that is included in NUREG-1432, *Standard Technical Specifications Combustion Engineering Plants*, Revision 3.1, SR 3.6.3.3 and SR 3.6.3.4 with consideration for the difference in TS format. NUREG-1432 reflects Technical Specification Task Force (TSTF) Improved Standard Technical Specification Change Traveler No. 45 (TSTF-45-A) which was approved by the NRC on July 26, 1999.

Approval of the proposed change is requested by December 31, 2006.

2.0 PROPOSED CHANGE

The proposed change revises ANO-2 TS SR 4.6.1.1 a, which currently states:

"At least once per 31 days by verifying that all penetrations* not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic valves secured in their positions, except for valves that are open under administrative control as permitted by Specification 3.6.3.1."

The * note states the following:

"*Except valves, blind flanges, and deactivated automatic valves which are located inside the containment and are locked, sealed, or otherwise secured in the closed position. These penetrations shall be verified closed prior to entering Mode 4 from Mode 5, except that such verification need not be performed more often than once per 92 days."

The proposed change is as follows and is consistent with the wording in NUREG-1432, *Standard Technical Specifications Combustion Engineering Plants* (SRs 3.6.3.3 and 3.6.3.4), with consideration of the different TS format:

“At least once per 31 days by verifying that each containment isolation manual valve and blind flange (Note 1) that is located outside containment and not locked, sealed, or otherwise secured and is required to be closed during accident conditions is closed, except for containment isolation valves that are open under administrative control as permitted by Specification 3.6.3.1.”

The proposed change will delete the current * note and incorporate the exception and requirements contained in the * note in a new SR 4.6.1.1 d as follows:

“Prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days by verifying each containment isolation manual valve and blind flange (Note 1) that is located inside containment and not locked, sealed, or otherwise secured and required to be closed during accident conditions is closed, except for containment isolation valves that are open under administrative controls as permitted by Specification 3.6.3.1.”

A new note will be added as follows:

“Note 1: Valves and blind flanges in high radiation areas may be verified by use of administrative means.”

In summary, a change is proposed to clarify the existing SR and * note. The proposed change will specifically exclude verification of the normally locked, sealed, or otherwise secured closed valves, blind flanges, and the deactivated automatic valves. A new Mode 5 to 4 SR will be added to replace the existing * note since the note contains a requirement to perform the surveillance for those valves located inside containment. The change also allows an alternate means for performing valve verification when the valve is located in a high radiation area. The change will result in reducing radiological exposure to Operations, Health Physics, and Security personnel.

3.0 BACKGROUND

The ANO-2 TS 3.6.1.1 requires that containment integrity be maintained in Modes 1, 2, 3, and 4. ANO-2 TS 1.8 provides the following definition of containment integrity:

“CONTAINMENT INTEGRITY shall exist when:

- 1.8.1 All penetrations required to be closed during accident conditions are either:
 - a. Capable of being closed by an OPERABLE containment automatic isolation valve system, or
 - b. Closed by manual valves, blind flanges, or deactivated automatic valves secured in their closed positions, except for valves that are open under administrative control as permitted by Specification 3.6.3.1.
- 1.8.2 All equipment hatches are closed and sealed,
- 1.8.3 Each airlock is OPERABLE pursuant to Specification 3.6.1.3,

1.8.4 The containment leakage rates are within the limits of Specification 3.6.1.2, and

1.8.5 The sealing mechanism associated with each penetration (e.g., welds, bellows or O-rings) is OPERABLE.

Surveillance Requirement 4.6.1.1 provides the requirements that must be met to ensure containment integrity is demonstrated. Containment integrity ensures that the release of radioactive materials from the containment atmosphere will be restricted to those leakage paths and associated leak rates assumed in the accident analyses. This restriction, in conjunction with the leakage rate limitation, will limit the site boundary radiation doses to within the limits of 10 CFR 100 during accident conditions.

SR 4.6.1.1.a specifically addresses verification of all containment penetrations that are required to be closed during accident conditions to ensure they are closed or capable of being closed. The proposed change to SR 4.6.1.1.a will eliminate the current requirement to verify the position of deactivated automatic valves and normally locked valves that are located outside containment since these valves are already in the required accident position.

When an automatic valve is deactivated it is treated like a manual valve. If there is a valve handwheel on an automatic valve that will be deactivated, the handwheel is locked in the closed position. In addition, the breaker or air supply to the valve is placed in the appropriate position to ensure the valve is closed and movement is prohibited.

The ANO-2 containment isolation valve program/procedure ensures containment integrity is maintained through the establishment of configuration control for the containment isolation valves. The program/procedure was based on the guidance contained in Generic Letter (GL) 91-08, *Removal of Component Lists from Technical Specifications*. The following administrative controls, which are included in the ANO-2 TS Bases (TS 3/4.6.3) and in the procedure, were required by GL 91-08: "The opening of locked or sealed closed manual and deactivated automatic containment isolation valves on an intermittent basis under administrative control includes the following considerations: (1) stationing an operator, who is in constant communication with the control room, at the valve controls, (2) instructing the operator to close these valves in an accident situation, and (3) assuring that environmental conditions will not preclude access to close the valves and that this action will prevent the release of radioactivity outside the containment." These administrative controls in conjunction with procedural requirements to track any valve manipulations until the valve is restored to its closed position, which includes an independent verification that the valve is locked closed, provide assurance that the manual containment isolation valves are locked closed or controlled until they are locked closed.

Technical Specification 3.6.3.1 requires the operability of each containment isolation valve. The Specification ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment.

ANO-2 Safety Analysis Report (SAR) Table 6.2-26 provides a list of containment penetrations, i.e., fluid system piping, instrument lines, electrical equipment, and personnel access; and identifies the type of leak testing to be performed in accordance with 10 CFR 50, Appendix J.

4.0 TECHNICAL ANALYSIS

The containment isolation system consists of manual valves, remote manual valves, blind flanges, deactivated automatic valves, automatic valves, equipment hatches, airlocks, and sealing mechanisms on each penetration. The components of the containment isolation system provide the means of ensuring containment integrity exists when required during accident conditions.

Containment integrity is verified each month by performing SR 4.6.1.1.a. The outside containment isolation valves are located in the containment penetration rooms and many times in overhead areas that require protective clothing to access. The annual dose associated with performing the SR has been estimated to be 80 mRem. Therefore, the proposed elimination of the need to check those valves that are locked, sealed, or otherwise secured closed will result in reducing overall radiological exposure.

Technical Specification Task Force (TSTF) Improved Standard Technical Specification Change Traveler No. 45 (TSTF-45-A) was approved by the NRC on July 26, 1999. The TSTF stated that the proposed change was consistent with the valve position verification requirement for valves that have a function during an accident in other system TSs. Consistent with the logic of the TSTF, ANO-2 TS SR 4.5.2.b requires that each Emergency Core Cooling System (ECCS) subsystem be demonstrated operable, in part, by performance of a valve alignment of each valve that is in the flow path that is NOT locked, sealed or otherwise secured valves. The Emergency Feedwater system (EFW) and the Service Water (SW) system are also demonstrated to be operable, in part, by verifying that each valve in the flow path of the system that is NOT locked, sealed, or otherwise secured in position, is in its correct position (SR 4.7.1.2.a.1 and SR 4.7.3.1.a, respectively). The proposed change is therefore consistent with other ANO-2 TS SRs and the NRC approved traveler (TSTF-45-A).

Manual containment isolation valves may be opened intermittently under strict administrative controls which are contained in a plant procedure. As stated in the Background section, NRC GL 91-08, *Removal of Component Lists from Technical Specifications*, provided the guidance for the administrative requirements associated with opening manual containment isolation valves intermittently. Anytime a manual containment isolation valve is opened the procedure requires tracking of the valve configuration until the valve is restored to its locked closed position. The configuration tracking includes an independent verification of the locked closed position of the valve. These steps provide assurance that the valves are locked closed after being manipulated and therefore performance of the monthly surveillance to verify the valves are closed and locked is redundant to the controls that are in place.

The addition of the note that allows an alternate means of verifying valves that are located in high radiation areas is acceptable since access to these areas is restricted in accordance with the requirements of ANO-2 TS 6.7, High Radiation Area. It is very unlikely that valves located in high radiation areas will be misaligned after they have been verified to be locked closed.

5.0 REGULATORY ANALYSIS

5.1 Applicable Regulatory Requirements/Criteria

The proposed change has been evaluated to determine whether applicable regulations and requirements continue to be met. Entergy has determined that the proposed change does not require any exemptions or relief from regulatory requirements, other than the TS, and does not affect conformance with any General Design Criterion (GDC) differently than described in the Arkansas Nuclear One, Unit 2 (ANO-2) Safety Analysis Report (SAR.)

The containment isolation systems are designed in accordance with 10 CFR 50 Appendix A, GDC 54, 55, 56 and 57, and meet the leak testing criteria of 10 CFR 50, Appendix J. The applicable criterion for each penetration is shown in ANO-2 SAR Table 6.2-26. The containment isolation systems are also designed to withstand the design basis earthquake and the credible failure of any single active or passive component without loss of isolating capability. Because no design changes are proposed these requirements remain satisfied.

5.2 No Significant Hazards Consideration

A change is proposed to the Arkansas Nuclear One, Unit 2 (ANO-2) surveillance requirements (SRs) associated with ANO-2 Technical Specification (TS) 3.6.1.1, Primary Containment – Containment Integrity. The proposed change will clarify the existing SR 4.6.1.1.a and associated * note. The proposed change to SR 4.6.1.1.a, which provides a check of those valves located outside containment, will specifically exclude verification of the normally locked, sealed, or otherwise secured closed valves, blind flanges, and the deactivated automatic valves. A new Mode 5 to 4 SR (proposed SR 4.6.1.1.d) will be added to replace the existing * note since the note contains a requirement to perform a surveillance of the valves located inside containment. The proposed change also allows an alternate means for performing valve verification when the valve is located in a high radiation area. The change will result in reducing radiological exposure to Operations, Health Physics, and Security personnel. Taking into account the format difference between the ANO-2 TSs and Revision 3.1 of NUREG-1432, *Standard Technical Specifications Combustion Engineering Plants*, the proposed change is consistent with Technical Specification Task Force (TSTF) Improved Standard Technical Specification Change Traveler No. 45 (TSTF-45-A), which was approved by the NRC on July 26, 1999.

Entergy Operations, Inc. has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The accident mitigation features of the plant for previously evaluated accidents are not affected by the proposed change. No changes are proposed to the physical components or to the containment isolation function.

Repositioning of manual containment isolation valves is procedurally controlled and governed by the note that is contained in TS 3.6.3.1, Containment Isolation Valves, which allows opening locked or sealed closed valves on an intermittent basis. The valve position is tracked until it is restored to its original position (locked or deactivated position, as appropriate). While the valve remains open, an individual, in constant communication with the control room staff, is stationed at the valve. If an accident were to occur, the control room staff would direct the individual stationed at the valve to close the valve thereby precluding the release of radioactivity outside containment.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed change does not change the design, method of operation, or configuration of the plant. The procedural controls that establish the ANO-2 containment valve program controls and include the administrative controls that are associated with the note in TS 3.6.3.1, ensure containment integrity is appropriately established such that no new or different types of accidents are created.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No.

The proposed change does not change the design basis for any equipment in the plant. The proposed change will exclude verification of the normally locked, sealed, or otherwise secured closed valves, blind flanges, and the deactivated automatic valves; however, the administrative controls applied to these components ensure that containment integrity is maintained.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, Entergy concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

5.3 Environmental Considerations

The proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

Attachment 2

2CAN020601

Proposed Technical Specification Changes (mark-up)

3/4.6 CONTAINMENT SYSTEMS

3/4.6.1 PRIMARY CONTAINMENT

CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.1 Primary CONTAINMENT INTEGRITY shall be maintained.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

Without primary CONTAINMENT INTEGRITY, restore CONTAINMENT INTEGRITY within one hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.1 Primary CONTAINMENT INTEGRITY shall be demonstrated:

- a. At least once per 31 days by verifying that ~~all penetrations* not capable of being closed by OPERABLE~~ each containment ~~automatic~~ isolation manual valves and blind flange (Note 1) that is located outside containment and not locked, sealed, or otherwise secured and is required to be closed during accident conditions ~~are is closed by valves, blind flanges, or deactivated automatic valves secured in their positions,~~ except for containment isolation valves that are open under administrative control as permitted by Specification 3.6.3.1.
- b. By verifying that each containment air lock is OPERABLE per Specification 3.6.1.3.
- c. After each closing of the equipment hatch, by leak rate testing the equipment hatch seals in accordance with the Containment Leakage Rate Testing Program.
- d. Prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days by verifying each containment isolation manual valve and blind flange (Note 1) that is located inside containment and not locked, sealed, or otherwise secured and required to be closed during accident conditions is closed, except for containment isolation valves that are open under administrative controls as permitted by Specification 3.6.3.1.

~~* Except valves, blind flanges, and deactivated automatic valves which are located inside the containment and are locked, sealed, or otherwise secured in the closed position. These penetrations shall be verified closed prior to entering Mode 4 from Mode 5, except that such verification need not be performed more often than once per 92 days.~~

Note 1: Valves and blind flanges in high radiation areas may be verified by use of administrative means.