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February 24, 2000

2CAN020003

U. S. Nuclear Regulatory Commission  
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Washington, DC 20555

Subject: Arkansas Nuclear One - Unit 2  
Docket No. 50-368  
License No. NPF-6  
Proposed Technical Specification Changes Removing Unnecessary Mode  
Restrictions For Surveillance Performance

Gentlemen:

Attached for your review and approval are proposed changes to the Arkansas Nuclear One – Unit 2 (ANO-2) Technical Specifications (TS). The proposed changes affect the ANO-2 Surveillance Requirements 4.4.11 on High Point Vent flow verification, 4.6.1.1.a on Containment Penetration verification (non-automatic), and 4.6.3.1.2 on Containment Isolation Valve actuation test. These TS surveillances require testing to be performed during Modes 5 and/or 6. The proposed change will eliminate the specific mode restrictions of these surveillance requirements. In so doing, testing may be performed, where prudent, during plant conditions other than that currently restricted (for example, during defueled conditions).

Because many of these tests could be detrimental to personnel safety or stable plant operation when in Modes 1 and 2, the requirement to perform them in Modes 5 and/or 6 is intended to ensure the plant is in a shutdown state, therefore, precluding unnecessary perturbations on reactor operation or an unnecessary hazard to station personnel. However, the current restriction prevents the surveillance from being performed during the non-mode condition when the reactor vessel is defueled or at other times that may be deemed prudent by the licensee. Other similar ANO-2 specifications only require the reactor to be shutdown for surveillance performance, without addressing a specific mode of operation. Furthermore, the Revised Standard Technical Specifications (RSTS) provide only a set frequency (such as 18 months) for the performance of surveillances, without specifying a specific mode of operation or plant condition. The philosophy of the RSTS rests on the fact that it is the responsibility of the licensee to plan and perform surveillances during conditions where risk to the reactor or plant personnel are minimized. Therefore, in order to obtain consistency with the RSTS and to eliminate unnecessary restrictions, the aforementioned surveillance requirements are being revised to delete references within the specifications to the defined terms *Cold Shutdown* and *Refueling Mode*.

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This proposed changes have 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 the changes involve no significant hazards considerations. The basis for this determination is included in the attached submittal.

The proposed changes contained in this submittal are similar to those of NRC SER Amendments 91 (Unit 1) and 78 (Unit 2) to the South Texas Project facility, dated September 23, 1997. NRC SER Amendment 121 to Callaway Plant, Unit 1, dated February 24, 1998 is also similar to the proposed changes within this submittal. The proposed changes are intended to support scheduling efforts for the upcoming ANO-2 Refueling Outage 2R14. Therefore, Entergy Operations, Inc. requests approval of the proposed changes by September 1, 2000, with an implementation period of 30 days.

Very truly yours,

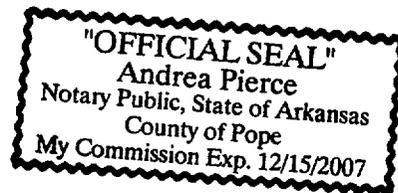


CA/dbb  
Attachment

To the best of my knowledge and belief, the statements contained in this submittal are true.

SUBSCRIBED AND SWORN TO before me, a Notary Public in and for Pope County and the State of Arkansas, this 24<sup>th</sup> day of February, 2000.

  
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Notary Public  
My Commission Expires 12/15/2007



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ATTACHMENT 1

TO

2CAN020003

PROPOSED TECHNICAL SPECIFICATION

AND

RESPECTIVE SAFETY ANALYSES

IN THE MATTER OF AMENDING

LICENSE NO. NPF-6

ENTERGY OPERATIONS, INC.

ARKANSAS NUCLEAR ONE, UNIT ONE AND UNIT TWO

DOCKET NO. 50-368

## **DESCRIPTION OF PROPOSED CHANGES**

The proposed change to the Arkansas Nuclear One, Unit 2 (ANO-2) Technical Specifications (TS) is necessary to eliminate the unnecessary mode restrictions on the Surveillance Requirements listed below. Revising the requirements to allow testing to be performed during other plant conditions is consistent with the Revised Standard Technical Specifications (RSTS). The following revisions are proposed:

- Delete reference to the operational mode Cold Shutdown in Surveillance Requirement 4.4.11 High Point Vent flow test of Specification 3.4.11 on page 3/4 4-27.
- Revise the footnote at bottom of page 3/4 6-1 for Surveillance Requirement 4.6.1.1.a Containment Penetration verification (non-automatic) of Specification 3.6.1.1. The note currently implies that the penetrations inside containment must be verified while in the Cold Shutdown condition. The footnote is being revised to delete reference to the operational mode Cold Shutdown and state that the surveillance must be performed prior to entering Mode 4 from a Mode 5 condition. This is consistent with the RSTS.
- Delete reference to operational modes Cold Shutdown and Refueling Mode from Surveillance Requirement 4.6.3.1.2 of Specification 3.6.3.1 on page 3/4 6-17.

## **BACKGROUND**

ANO-2 TS Surveillance Requirement 4.4.11 states that flow must be verified through each High Point Vent path every 18 months during Cold Shutdown. The intent of this mode restriction was to protect plant personnel and reactor systems from unnecessary risk should the test be performed during reactor operation or at high reactor coolant system pressures. In addition, the Refueling Mode is not mentioned here since much of the High Point Vent piping must be removed in order to support refueling activities, eliminating the opportunity to perform such testing in the Refueling Mode. Therefore, the requirement to perform this test in Cold Shutdown operational mode was intended to prevent the licensee from scheduling test performance at a time when unnecessary risk might be placed on unit operation or personnel safety.

The footnote associated with ANO-2 TS Surveillance Requirement 4.6.1.1.a states that non-automatic containment penetrations located inside the containment building must be verified in their required positions during Cold Shutdown if not verified within the last 92 days. The footnote was intended to provide relief from verifying inside-containment valves once every 31 days as stated in 4.6.1.1.a since the requirements of containment integrity in Modes 1, 2, 3, and 4 are sufficient to provide reasonable assurance that inside-containment valves will not be re-positioned during these modes of operation, except under administrative controls as allowed by TSs. Depending on outage scheduling, containment integrity, other than final cleanup and closeout could be established while in the Refueling Mode of operation.

Regardless of when the surveillance of inside-containment valves is scheduled, the licensee is under obligation to ensure proper establishment and control of containment integrity for all applicable modes of operation and, therefore, specifying a mode of performance for the aforementioned surveillance within the TSs places unnecessary restrictions upon the licensee.

ANO-2 TS Surveillance Requirement 4.6.3.1.2 states that each containment isolation valve shall be demonstrated operable during the Cold Shutdown or Refueling Mode at least once per 18 months by verifying that, on a containment isolation test signal, each isolation valve actuates to its isolation position. This test is performed by actuating a section of the Engineered Safety Feature Actuation System and verifying that affected containment isolation valves reach their required isolated positions. Since several valves will close simultaneously, performing this test during reactor operation could result in a plant transient or a reactor trip. Therefore, the requirement to perform this test in the Cold Shutdown or Refueling Mode was intended to prevent the licensee from scheduling test performance at a time when unnecessary risk would be placed on reactor operations.

The proposed changes contained in this submittal are similar to those of NRC SER Amendments 91 (Unit 1) and 78 (Unit 2) to the South Texas Project facility, dated September 23, 1997. NRC SER Amendment 121 to Callaway Plant, Unit 1, dated February 24, 1998 is also similar to the proposed changes within this submittal.

#### **DISCUSSION OF CHANGE**

Most ANO-2 Surveillance Requirements do not specify a mode of operation or plant condition, although a few do state that performance should be during "shutdown conditions." The RSTS does not specify plant conditions or modes of operation. Restrictions to such mode conditions do not relieve the licensee from proper planning, scheduling, and performance of surveillance activities. For example, a restriction of Cold Shutdown does not mean that the licensee can safely perform the subject test anytime in the Cold Shutdown mode of operation. Other activities in progress may warrant delaying testing activities to a more prudent period in order to reduce risk to station personnel or unnecessarily perturbing the reactor systems or support systems. This understanding was evident in the development of the RSTS where mode restrictions and plant conditions are not applied to surveillance performance intervals, the responsibility of prudent planning, scheduling, and performance of surveillances being the responsibility of the licensee.

Based on the above discussion, mode restrictions are being deleted from ANO-2 TS Surveillances 4.4.11 and 4.6.3.1.2. The footnote associated with Surveillance Requirement 4.6.1.1.a is being revised to state the intent that the surveillance be performed prior to entering Mode 4 whenever the unit has entered a Cold Shutdown condition, if not performed within the previous 92 days. The proposed changes remove unnecessary mode restrictions from surveillances while maintaining the assurances that surveillances will be completed within specified time intervals and prior to entering a mode where failure to perform the surveillance could be detrimental to station operations.

Deleting the mode restrictions from the aforementioned surveillance requirements will not, therefore, relieve the licensee from its current responsibility of performing such surveillances during periods of minimal risk to plant systems and station personnel. Many times, the containment building may be safely (both radiologically and environmentally) entered in modes other than Modes 1 and 2. Performance of pre-planned surveillances could, in many cases, be performed in modes other than Modes 5 and 6 provided the risk to personnel and the reactor are minimized and such performance can meet the intent of its acceptance criteria. Therefore, the proposed changes to the aforementioned surveillance requirements are believed to be reasonable and are consistent with the philosophies of the RSTS.

### **DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION**

Entergy Operations, Inc. is proposing that the Arkansas Nuclear One, Unit 2 (ANO-2) Operating Licenses be amended to delete current surveillance mode restrictions for Technical Specification (TS) Surveillance Requirements 4.4.11 High Point Vent flow test, 4.6.1.1.a Containment Penetration verification (non-automatic), and 4.6.3.1.1 Containment Isolation Valve actuation test. The original intent of the mode restrictions was to aid in ensuring that the licensee did not allow performance of these tests during plant conditions where unnecessary risk to station personnel or station equipment may result. However, the mode restrictions do not prevent such risk if surveillances are performed without proper preplanning, scheduling, and contingency planning. Other ANO-2 TSs do not restrict surveillances to specific modes of operation and the philosophies of the Revised Standard Technical Specifications (RSTS) hold the licensee responsible for proper planning, scheduling and performance of surveillance tests, stating no mode restrictions or plant conditions for test performance. Therefore, deletion and/or revision of the mode restrictions associated with the aforementioned surveillance requirements acts to remove unnecessary restrictions from the ANO-2 TSs and provides greater consistency with the philosophies employed in the RSTSs.

An evaluation of the proposed changes has been performed in accordance with 10CFR50.91(a)(1) regarding no significant hazards considerations using the standards in 10CFR50.92(c). A discussion of these standards as they relate to this amendment request follows:

**Criterion 1 - Does Not Involve a Significant Increase in the Probability or Consequences of an Accident Previously Evaluated.**

Current regulation requires the licensee to responsibly plan, schedule, and perform testing of station equipment. Furthermore, the philosophies of the RSTS do not restrict surveillance performance to specific modes of operation or other plant conditions. Deletion of the mode restrictions will not relinquish licensee responsibility from prudent planning, scheduling, and performance of testing activities and may provide the licensee lower-risk periods of opportunity for test performance. Because

of this, the proposed changes are considered to be administrative in nature and do not significantly affect the plant or personnel safety. Modes in which surveillances are performed are not analyzed in association with accident probability or the consequences of an accident. The proposed changes reduce unnecessary restrictions on the licensee and provide consistency with the philosophies of the RSTS.

Therefore, the proposed changes do not involve a significant increase in the probability or consequences of any accident previously evaluated.

**Criterion 2 - Does Not Create the Possibility of a New or Different Kind of Accident from any Previously Evaluated.**

The licensee will continue to be accountable for proper and prudent planning, scheduling, and performance of surveillance activities in the absence of the aforementioned mode restrictions proposed for deletion. Therefore, the proposed changes are considered to be administrative in nature and do not significantly affect the plant or personnel safety. The probability of a new or different kind of accident being created remains unchanged since the licensee currently is required to properly plan and execute surveillance tests, even within specific modes of operation. Other activities presently ongoing during the currently specified operational modes could result in an unexpected or unforeseen transient or condition if surveillance testing is not properly planned and executed given the other activities in progress and current plant conditions. Since the responsibility of the licensee in these matters remains unchanged by the proposed changes, the possibility of a new or different kind of accident being created also remains unchanged.

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

**Criterion 3 - Does Not Involve a Significant Reduction in the Margin of Safety.**

The licensee will continue to be accountable for proper and prudent planning, scheduling, and performance of surveillance activities in the absence of the aforementioned mode restrictions proposed for deletion. Therefore, the proposed changes are considered to be administrative in nature and do not significantly affect the plant or personnel safety. The margin to safety remains unchanged since the licensee currently is required to properly plan and execute surveillance tests, even within specific modes of operation. Other activities presently ongoing during the currently specified operational modes could result in an unexpected or unforeseen transient or condition if surveillance testing is not properly planned and executed given the other activities in progress and current plant conditions. Since the responsibility of the licensee in these matters remains unchanged by the proposed changes, no significant reduction in the margin to safety is evident.

Therefore, the proposed changes do not involve a significant reduction in the margin of safety.

Therefore, based on the reasoning presented above and the previous discussion of the amendment request, Entergy Operations, Inc. has determined that the requested changes do not involve a significant hazards consideration.

### **ENVIRONMENTAL IMPACT EVALUATION**

10 CFR 51.22(c) provides criteria for and identification of licensing and regulatory actions eligible for categorical exclusion from performing an environmental assessment. A proposed amendment to an operating license for a facility requires no environmental assessment if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant hazards consideration, (2) result in a significant change in the types or significant increase in the amounts of any effluents that may be released off-site, or (3) result in a significant increase in individual or cumulative occupational radiation exposure. Entergy Operations, Inc. has reviewed this license amendment and has determined that it meets the eligibility criteria for categorical exclusion set forth in 10 CFR 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 proposed license amendment. The bases for this determination is as follows:

1. The proposed license amendment does not involve a significant hazards consideration as described previously in the evaluation.
2. As discussed in the significant hazards evaluation, the proposed license amendment does not result in a significant change or significant increase in the radiological doses for any Design Based Accident. The proposed license amendment does not result in a significant change in the types or a significant increase in the amounts of any effluents that may be released off-site.
3. The proposed license amendment does not result in a significant increase to the individual or cumulative occupational radiation exposure because this does not modify the method of operation of systems and components necessary to prevent a radioactive release.

**PROPOSED ANO-2 TECHNICAL SPECIFICATION CHANGES**

REACTOR COOLANT SYSTEM

REACTOR COOLANT SYSTEM VENTS

LIMITING CONDITION FOR OPERATION

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3.4.11 At least one reactor coolant system vent path consisting of at least two valves in series shall be OPERABLE at each of the following locations:

1. Reactor Vessel Head
2. Pressurizer Steam Space (RCS High Point Vents)

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

ACTION:

- a. With less than one vent path from each of the locations OPERABLE, STARTUP and/or POWER OPERATION may continue provided the inoperable vent path(s) is maintained closed; restore the inoperable vent path to OPERABLE status within 30 days or be in HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With both vent paths 1 and 2 above inoperable, restore at least one of the vent paths to OPERABLE status within 72 hours or be in HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

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4.4.11 Each reactor coolant system vent path shall be demonstrated OPERABLE at least once per 18 months by verifying flow through the reactor coolant vent system vent paths.

### 3/4.6 CONTAINMENT SYSTEMS

#### 3/4.6.1 PRIMARY CONTAINMENT

##### CONTAINMENT INTEGRITY

##### LIMITING CONDITION FOR OPERATION

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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

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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 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.
- 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.

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\*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.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

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- 4.6.3.1.2 Each containment isolation valve shall be demonstrated OPERABLE at least once per 18 months by verifying that on a containment isolation test signal, each isolation valve actuates to its isolation position.
- 4.6.3.1.3 The isolation time of each power operated or automatic containment isolation valve shall be determined to be within its limit when tested pursuant to Specification 4.0.5.
- 4.6.3.1.4 Prior to exceeding conditions which require establishment of reactor building integrity per TS 3.6.1.1, the leak rate of the containment purge supply and exhaust isolation valves shall be verified to be within acceptable limits per TS 4.6.1.2, unless the test has been successfully completed within the last three months.

**MARKUP OF CURRENT ANO-2 TECHNICAL SPECIFICATIONS**

(FOR INFO ONLY)

REACTOR COOLANT SYSTEM

REACTOR COOLANT SYSTEM VENTS

LIMITING CONDITION FOR OPERATION

---

3.4.11 At least one reactor coolant system vent path consisting of at least two valves in series shall be OPERABLE at each of the following locations:

1. Reactor Vessel Head
2. Pressurizer Steam Space (RCS High Point Vents)

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

ACTION:

- a. With less than one vent path from each of the locations OPERABLE, STARTUP and/or POWER OPERATION may continue provided the inoperable vent path(s) is maintained closed; restore the inoperable vent path to OPERABLE status within 30 days or be in HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With both vent paths 1 and 2 above inoperable, restore at least one of the vent paths to OPERABLE status within 72 hours or be in HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

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4.4.11 Each reactor coolant system vent path shall be demonstrated OPERABLE at least once per 18 months by verifying flow through the reactor coolant vent system vent paths ~~during COLD SHUTDOWN.~~

### 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

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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 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.
- 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.

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\*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 ~~during each COLD SHUTDOWN~~ prior to entering Mode 4 from Mode 5, except that such verification need not be performed more often than once per 92 days.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

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- 4.6.3.1.2 Each containment isolation valve shall be demonstrated OPERABLE ~~during the COLD SHUTDOWN or REFUELING MODE~~ at least once per 18 months by verifying that on a containment isolation test signal, each isolation valve actuates to its isolation position.
- 4.6.3.1.3 The isolation time of each power operated or automatic containment isolation valve shall be determined to be within its limit when tested pursuant to Specification 4.0.5.
- 4.6.3.1.4 Prior to exceeding conditions which require establishment of reactor building integrity per TS 3.6.1.1, the leak rate of the containment purge supply and exhaust isolation valves shall be verified to be within acceptable limits per TS 4.6.1.2, unless the test has been successfully completed within the last three months.