

December 8, 2003

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Mail Stop P1-137  
Washington, DC 20555-0001

Ladies and Gentlemen:

ULNRC-04923



**DOCKET NO. 50-483  
UNION ELECTRIC COMPANY  
CALLAWAY PLANT  
REVISION TO TECHNICAL SPECIFICATION 5.5.6,  
"CONTAINMENT TENDON SURVEILLANCE PROGRAM,"  
AND TECHNICAL SPECIFICATION 5.5.16,  
"CONTAINMENT LEAKAGE RATE TESTING PROGRAM"**

Union Electric Company (AmerenUE) hereby transmits an application for amendment to Facility Operating License No. NPF-30 for the Callaway Plant in accordance with the provisions of 10 CFR 50.90. The proposed amendment would revise Technical Specification (TS) Section 5.5.6, "Containment Tendon Surveillance Program," and Section 5.5.16, "Containment Leakage Rate Testing Program," for consistency with the requirements of 10 CFR 50.55a(g)(4) for components classified as Code Class CC. This regulation requires licensees to update their containment inservice inspection requirements in accordance with Subsections IWE and IWL of Section XI, Division I of the ASME Boiler and Pressure Vessel Code as limited by 10 CFR 50.55a(b)(2)(vi) and modified by 10 CFR 50.55a(b)(2)(viii) and 10 CFR 50.55a(b)(2)(ix).

Attachments 1 through IV provide the Evaluation, Markup of Technical Specifications, Retyped Technical Specifications, and Proposed TS Bases Changes, respectively, in support of this amendment request. Attachment IV contains the TS Bases changes (for information only) to assist the staff in its review of the proposed changes. Revision to the TS Bases will be implemented pursuant to the TS Bases Control Program, TS 5.5.14, upon implementation of this license amendment. Attachment V contains a list of commitments.


A001

This amendment application was approved by the Callaway Plant Onsite, Review Committee and the Nuclear Safety Review Board. In accordance with 10 CFR 50.91, a copy of this application, with attachments, is being provided to the designated Missouri State official.

AmerenUE is submitting this license amendment request in conjunction with an industry consortium of six stations as a result of a mutual agreement known as Strategic Teaming and Resource Sharing (STARS). The STARS group consists of the six stations operated by TXU Generation Company LP, AmerenUE, WCNOC, Pacific Gas and Electric Company, STP Nuclear Operating Company, and Arizona Public Service Company. Other members of the group are expected to submit license amendment requests similar to this one. Due to differences between the STARS plants, there may be some differences in the plant license amendment requests, particularly for the information provided in Attachment 1.

AmerenUE requests approval of the proposed amendment by May, 2004 to support performance of the containment tendon surveillances as early as June, 2004. It is anticipated that the license amendment, as approved will be effective upon issuance, to be implemented within 90 days from the date of issuance. Please contact us for any questions you may have regarding this application.

Very truly yours,



Keith D. Young  
Manager, Regulatory Affairs

PMB/mlo

- Attachments:
- 1) Evaluation
  - 2) Markup of Technical Specification pages
  - 3) Retyped Technical Specification pages
  - 4) Proposed TS Bases Changes (for information only)
  - 5) List of Commitments

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December 5, 2003  
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STATE OF MISSOURI            )  
  )  
COUNTY OF CALLAWAY        )            S S

Keith D. Young, of lawful age, being first duly sworn upon oath says that he is Manager, Regulatory Affairs, for Union Electric Company; that he has read the foregoing document and knows the content thereof; that he has executed the same for and on behalf of said company with full power and authority to do so; and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

By Keith D. Young  
Keith D. Young  
Manager, Regulatory Affairs

SUBSCRIBED and sworn to before me this 8<sup>th</sup> day of December, 2003.

**TERRA E. COOK**  
**Notary Public - Notary Seal**  
**STATE OF MISSOURI**  
**Callaway County**  
**My Commission Expires May 13, 2008**

Terra E. Cook

Attachment 1

Evaluation

## EVALUATION

### 1.0 DESCRIPTION

The proposed amendment revises Technical Specification (TS) Section 5.5.6, "Containment Tendon Surveillance Program," and Section 5.5.16, "Containment Leakage Rate Testing Program," for consistency with the requirements of 10 CFR 50.55a(g)(4) for components classified as Code Class CC. This regulation requires licensees to update their containment inservice inspection requirements in accordance with Subsections IWE and IWL of Section XI, Division I of the ASME Boiler and Pressure Vessel Code as limited by 10 CFR 50.55a(b)(2)(vi) and modified by 10 CFR 50.55a(b)(2)(viii) and 10 CFR 50.55a(b)(2)(ix).

### 2.0 PROPOSED CHANGE

The proposed change will revise:

- Technical Specification 5.5.6

This specification is revised to indicate that the Containment Tendon Surveillance Program, inspection frequencies, and acceptance criteria shall be in accordance with Section XI, Subsection IWL of the ASME Boiler and Pressure Vessel Code and applicable addenda as required by 10 CFR 50.55a, except where an exemption or relief has been authorized by the NRC. Additionally, the provisions of Surveillance Requirement (SR 3.0.2) are deleted from this specification.

- Technical Specification 5.5.16

This specification is revised to add the following exception to Regulatory Guide 1.163, "Performance- Based Containment Leak-Testing Program,"

"The visual examination of containment concrete surfaces intended to fulfill the requirements of 10 CFR 50, Appendix J, Option B testing, will be performed in accordance with the requirements of and frequency specified by ASME Section XI Code, Subsection IWL, except where relief has been authorized by the NRC.

The visual examination of the steel liner plate inside containment intended to fulfill the requirements of 10 CFR 50, Appendix J, Option B testing, will be performed in accordance with the requirements of and frequency specified by ASME Section XI Code, Subsection IWE, except where relief has been authorized by the NRC."

The TS Bases for SR 3.6.1.1 and SR 3.6.1.2 are also revised for consistency with the requirements of the ASME Code Section XI, Subsection IWL and applicable addenda as required by 10 CFR 50.55a.

### 3.0 BACKGROUND

On January 7, 1994, the Nuclear Regulatory Commission (NRC) published a proposed amendment to the regulations to incorporate by reference the 1992 Edition with the 1992 Addenda of Subsections IWE and IWL of Section XI, Division I of the ASME Boiler and Pressure Vessel Code (the Code). The final rule, Subpart 50.55a(g)(6)(ii)(B) of Title 10 of the Code of Federal Regulations (10 CFR), became effective on September 9, 1996, and requires licensees to implement Subsections IWE and IWL, with specified modifications and limitations, by September 9, 2001.

The containment consists of a prestressed, reinforced concrete, cylindrical structure with a hemispherical dome. The Post-tensioning System used for the shell and dome of the containment employs tendons. Each tendon consists of high strength steel wires and anchoring components. The prestressing load is transferred, by cold formed button heads on the ends of the individual wires through stressing washers, to steel bearing plates embedded in the structure. The unbonded tendons are installed in tendon ducts and tensioned in a predetermined sequence.

### 4.0 TECHNICAL ANALYSIS

Technical Specification 5.5.6, "Containment Tendon Surveillance Program," states in part, "The Containment Tendon Surveillance Program, and its inspection frequencies and acceptance criteria shall be in accordance with FSAR Chapter 16." As identified above, 10 CFR 50.55a(g)(4) requires licensees to update their containment inservice inspection requirements in accordance with Subsections IWE and IWL of Section XI, Division I of the ASME Boiler and Pressure Vessel Code as limited by 10 CFR 50.55a(b)(2)(vi) and modified by 10 CFR 50.55a(b)(2)(viii) and 10 CFR 50.55a(b)(2)(ix). This specification is being revised to reflect that the program will meet the requirements in 10 CFR 50.55a(g)(4).

10 CFR 50.55a(g)(5)(ii) states, in part: "If a revised inservice inspection program for a facility conflicts with the technical specification for the facility, the licensee shall apply to the Commission for Amendment of the technical specifications to conform the technical specification to the revised program." Based on the requirements in 10 CFR 50.55a, AmerenUE is required to update the technical specifications. The containment inservice inspection programs are required to be in accordance with ASME Code Section XI, Subsection IWL as modified by 10 CFR 50.55a(b)(2)(viii), except where an exemption or relief has been authorized by the NRC.

Additionally, since the tendon inspection frequencies will be in accordance with ASME Section XI, Subsection IWL, the provisions of SR 3.0.2 are no longer applicable and are deleted from Technical Specification 5.5.6. As discussed in the Technical Specification Bases for SR 3.0.2, the requirements of regulations take precedence over the Technical Specifications. As such, 10 CFR 50.55a requires the implementation of ASME Section XI, Subsection IWL and specifies the requirements for extending inspection frequencies.



Technical Specification 5.5.16 contains requirements for the Containment Leakage Rate Testing Program, and it specifies that the program shall be in accordance with the guidelines contained in Regulatory Guide 1.163. Regulatory Position C.3 of the regulatory guide states that Section 9.2.1, "Pretest Inspection and Test Methodology," of NEI 94-01 provides guidance for the visual examination of accessible interior and exterior surfaces of the containment system for structural problems. In order to allow for early uncovering of evidence of structural deterioration, these examinations should be conducted prior to initiating a Type A test, and during two other refueling outages before the next Type A test if the interval for the Type A test has been extended to 10 years. There are no specific requirements in NEI 94-01 for the visual examination except that it is to be a general visual examination of accessible interior and exterior surfaces of the primary containment components.

In addition to the requirements of Regulatory Guide 1.163 and NEI 94-01, the concrete surfaces of the containment must be visually examined in accordance with the ASME Section XI Code, Subsection IWL, and the liner plate inside containment must be visually examined in accordance with Subsection IWE. The frequency of visual examination of the concrete surfaces per Subsection IWL is once every five years, and the frequency of visual examination of the liner plate per Subsection IWE is, in general, three visual examinations over a 10-year period. The visual examinations performed pursuant to Subsection IWL may be performed at any time during power operation or during shutdown, and the visual examinations performed pursuant to Subsection IWE are performed during refueling outages since this is the only time that the liner plate is fully accessible.

In addition, the visual examinations performed pursuant to Subsections IWL and IWE are more rigorous than those performed pursuant to Regulatory Guide 1.163 and NEI 94-01. For example, Subarticle IWE-2320 requires the general visual examination to be the responsibility of an individual who is knowledgeable in the requirements for design, inservice inspection, and testing of Class MC and metallic liners of Class CC components. Subsection IWE, Subarticle-2330 requires the examination to be performed either directly or remotely, by an examiner with visual acuity sufficient to detect evidence of degradation.

Similarly, Subarticle IWL-2320 states that:

"The Responsible Engineer shall be a Registered Professional Engineer experienced in evaluating the inservice condition of structural concrete. The Responsible Engineer shall have knowledge of the design and Construction Codes and other criteria use in design and construction of concrete containments in nuclear power plants.

The Responsible Engineer shall be responsible for the following:

- (a) development of plans and procedures for examination of concrete surfaces;
- (b) approval, instruction, and training of concrete examination personnel
- (c) evaluation of examination results;
- (d) preparation of repair procedures;
- (e) submittal of report to the Owner documenting results of examinations and repairs.”

Based on the above, the Responsible Engineer will ensure that a comprehensive visual examination of the concrete is performed in accordance with Code requirements except where relief has been granted by the NRC. Furthermore, with respect to examinations performed pursuant to both Subsections IWL and IWE, visual examinations of both the concrete surfaces and the liner plate must be reviewed by an Inspector employed by a State or municipality of the United States or an Inspector regularly employed by an insurance company authorized to write boiler and pressure vessel insurance, in accordance with IWA-2110 and IWA-2120. The combination of the Code requirements for the rigor of the visual examinations plus the third-party review will more than offset the fact one fewer visual examination of the concrete will be performed during a 10-year interval. The fact that the concrete visual examination pursuant to Subsection IWL may be performed during power operation as opposed to during a refueling outage will have no effect on the quality of the examination and will provide flexibility in scheduling of the visual examinations.

## 5.0 REGULATORY ANALYSIS

This section addresses the standards of 10 CFR 50.92 as well as the applicable regulatory requirements and acceptance criteria.

### 5.1 NO SIGNIFICANT HAZARDS CONSIDERATION (NSHC)

The proposed amendment revises Technical Specification (TS) Section 5.5.6, “Containment Tendon Surveillance Program,” and Section 5.5.16, “Containment Leakage Rate Testing Program,” for consistency with the requirements of 10 CFR 50.55a(g)(4) for components classified as Code Class CC. The proposed change does not involve a significant hazards consideration for the Callaway Plant based on the three standards set forth in 10 CFR 50.92(c) 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 proposed change revises the TS administrative controls programs for consistency with the requirements of 10 CFR 50.55a(g)(4) for components classified as Code Class CC. The revised requirements do not affect the function of the containment post-

tensioning system components. The post-tensioning systems are passive components whose failure modes could not act as accident initiators or precursors.

The proposed change affects the frequency of visual examinations that will be performed for the concrete surfaces of the containment for the purpose of the Containment Leakage Rate Testing Program. In addition, the proposed change allows those examinations to be performed during power operation as opposed to during a refueling outage. The frequency of visual examinations of the concrete surfaces of the containment and the mode of operation during which those examinations are performed has no relationship to or adverse impact on the probability of any of the initiating events assumed in the accident analyses. The proposed change would allow visual examinations that are performed pursuant to NRC approved ASME Section XI Code requirements (except where relief has been granted by the NRC) to meet the intent of visual examinations required by Regulatory Guide 1.163, without requiring additional visual examinations pursuant to the Regulatory Guide. The intent of early detection of deterioration will continue to be met by the more rigorous requirements of the Code required visual examinations. As such, the safety function of the containment as a fission product barrier is maintained.

The proposed change does not impact any accident initiators or analyzed events or assumed mitigation of accident or transient events. They do not involve the addition or removal of any equipment, or any design changes to the facility.

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 revises the TS administrative controls programs for consistency with the requirements of 10 CFR 50.55a(g)(4) for components classified as Code Class CC. The function of the containment post-tensioning system components are not altered by this change. The change affects the frequency of visual examinations that will be performed for the concrete surfaces containments. In addition, the proposed change allows those examinations to be performed during power operation as opposed to during a refueling outage. The proposed change does not involve a modification to the physical configuration of the plant (i.e., no new equipment will be installed) or change in the methods governing normal plant operation. The proposed change will not impose any new or different requirements or introduce a new accident initiator, accident precursor, or malfunction mechanism. Additionally, there is no change in the types or increases in the amounts of any effluent that may be released off-site and there is no increase in individual or cumulative occupational exposure.

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 revises the TS administrative controls programs for consistency with the requirements of 10 CFR 50.55a(g)(4) for components classified as Code Class CC. The function of the containment post-tensioning system components are not altered by this change. The change affects the frequency of visual examinations that will be performed for the concrete surfaces containments. In addition, the proposed change allows those examinations to be performed during power operation as opposed to during a refueling outage. The safety function of the containment as a fission product barrier will be maintained.

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

**Conclusion:**

Based on the above, AmerenUE 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.

**5.2 APPLICABLE REGULATORY REQUIREMENTS/CRITERIA**

The regulatory basis for TS 3.6.1, "Containment," is to ensure that the primary containment is capable of remaining leak-tight following a loss of coolant accident. This ensures that offsite radiation exposures are maintained within the limits of 10CFR100.

10 CFR 50, Appendix A, General Design Criterion 16, "Design," requires that reactor containment and associated systems shall be provided to establish an essentially leak-tight barrier against the uncontrolled release of radioactivity to the environment and to assure that the containment design conditions important to safety are not exceeded for as long as the postulated accident conditions require.

This TS change will not reduce the leak-tightness of the containment. Therefore, based on the considerations discussed above:

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

## 6.0 ENVIRONMENTAL CONSIDERATION

AmerenUE has determined that the proposed amendment would change requirements with respect to the installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, AmerenUE has reviewed the proposed amendment and has determined that the amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amount of effluent that may be released offsite, or (iii) a significant increase in the 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), an environmental assessment of the proposed amendment is not required.

## 7.0 REFERENCES

1. 10 CFR 50.55a.
2. Regulatory Guide 1.163, "Performance-Based Containment Leak-Testing Program."
3. Letter dated January 18, 2000, to W. R. McCollum, Jr., Duke Energy Corporation, "Oconee Nuclear Station Units 1, 2, and 3 RE: Issuance of Amendments (TAC Nos. MA6568, MA6569, and MA6570)." Amendment Nos. 310.
4. Letter dated June 6, 2001, to J. B. Beasley, Jr., Southern Nuclear Operating Company, Inc, "Vogtle Electric Generating Plant, Units 1 and 2 RE: Issuance of Amendments (TAC Nos. MB1097 and MB1098)." Amendment Nos. 122 and 100.
5. Letter dated January 30, 2001, to C. H. Cruse, Constellation Nuclear, "Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2 RE: Containment Tendon Surveillance Program – Amendment (TAC Nos. MB0011 and MB0012)." Amendment Nos. 240 and 214.

## Attachment 2

### Markup of Technical Specification Pages

## 5.5 Programs and Manuals

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### 5.5.4 Radioactive Effluent Controls Program (continued)

- j. Limitations on the annual dose or dose commitment to any member of the public, beyond the site boundary, due to releases of radioactivity and to radiation from uranium fuel cycle sources, conforming to 40 CFR 190;
- k. The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Radioactive Effluent Controls Program surveillance frequency.

### 5.5.5 Component Cyclic or Transient Limit

This program provides controls to track the FSAR, Section 3.9(N).1.1, "Design Transients", cyclic and transient occurrences to ensure that components are maintained within the design limits.

### 5.5.6 Containment Tendon Surveillance Program

This program provides controls for monitoring any tendon degradation, including effectiveness of its corrosion protection medium, to ensure containment structural integrity. The program shall include baseline measurements prior to initial operations. The Tendon Surveillance Program, inspection frequencies, and acceptance criteria shall be in accordance with FSAR Chapter 16. *Insert A*

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Tendon Surveillance Program inspection frequencies.

### 5.5.7 Reactor Coolant Pump Flywheel Inspection Program

This program shall provide for the inspection of each reactor coolant pump flywheel per the recommendations of Regulatory Position C.4.b of Regulatory Guide 1.14, Revision 1, August 1975.

In lieu of Position C.4.b(1) and C.4.b(2), a qualified in-place UT examination over the volume from the inner bore of the flywheel to the circle one-half of the outer radius or a surface examination (MT and/or PT) of exposed surfaces of the removed flywheels may be conducted at approximately 10 year intervals coinciding with the Inservice Inspection schedule as required by ASME Section XI.

**INSERT A**

**Section XI, Subsection IWL of the ASME Boiler and Pressure Vessel Code and applicable addenda as required by 10 CFR 50.55a, except where an exemption or relief has been authorized by the NRC.**



5.5 Programs and Manuals

5.5.15 Safety Function Determination Program (SFDP) (continued)

- c. Provisions to ensure that an inoperable supported system's Completion Time is not inappropriately extended as a result of multiple support system inoperabilities; and
- d. Other appropriate limitations and remedial or compensatory actions.

A loss of safety function exists when, assuming no concurrent single failure, a safety function assumed in the accident analysis cannot be performed. For the purpose of this program, a loss of safety function may exist when a support system is inoperable, and:

- a. A required system redundant to the system(s) supported by the inoperable support system is also inoperable; or
- b. A required system redundant to the system(s) in turn supported by the inoperable supported system is also inoperable; or
- c. A required system redundant to the support system(s) for the supported systems (a) and (b) above is also inoperable.

The SFDP identifies where a loss of safety function exists. If a loss of safety function is determined to exist by this program, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered.

5.5.16 Containment Leakage Rate Testing Program

- a. A program shall be established to implement the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995, <sup>②</sup> Insert B
- b. The peak calculated containment internal pressure for the design basis loss of coolant accident,  $P_a$ , is 48.1 psig.
- c. The maximum allowable containment leakage rate,  $L_a$ , at  $P_a$ , shall be 0.20% of the containment air weight per day.
- d. Leakage rate acceptance criteria are:

(continued)

INSERT B

as modified by the following exceptions:

1. The visual examination of containment concrete surfaces intended to fulfill the requirements of 10 CFR 50, Appendix J, Option B testing, will be performed in accordance with the requirements of and frequency specified by ASME Section XI Code, Subsection IWL, except where relief has been authorized by the NRC.
2. The visual examination of the steel liner plant inside containment intended to fulfill the requirements of 10 CFR 50, Appendix J, Option B testing, will be performed in accordance with the requirements of and frequency specified by ASME Section XI Code, Subsection IWE, except where relief has been authorized by the NRC.

**Attachment 3**

**Retyped Technical Specification Pages**

## 5.5 Programs and Manuals

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### 5.5.4 Radioactive Effluent Controls Program (continued)

- j. Limitations on the annual dose or dose commitment to any member of the public, beyond the site boundary, due to releases of radioactivity and to radiation from uranium fuel cycle sources, conforming to 40 CFR 190;
- k. The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Radioactive Effluent Controls Program surveillance frequency.

### 5.5.5 Component Cyclic or Transient Limit

This program provides controls to track the FSAR, Section 3.9(N).1.1, "Design Transients", cyclic and transient occurrences to ensure that components are maintained within the design limits.

### 5.5.6 Containment Tendon Surveillance Program

This program provides controls for monitoring any tendon degradation, including effectiveness of its corrosion protection medium, to ensure containment structural integrity. The program shall include baseline measurements prior to initial operations. The Tendon Surveillance Program, inspection frequencies, and acceptance criteria shall be in accordance with Section XI, Subsection IWL of the ASME Boiler and Pressure Vessel Code and applicable addenda as required by 10 CFR 50.55a, except where an exemption or relief has been authorized by the NRC.

The provisions of SR 3.0.3 are applicable to the Tendon Surveillance Program inspection frequencies.

### 5.5.7 Reactor Coolant Pump Flywheel Inspection Program

This program shall provide for the inspection of each reactor coolant pump flywheel per the recommendations of Regulatory Position C.4.b of Regulatory Guide 1.14, Revision 1, August 1975.

In lieu of Position C.4.b(1) and C.4.b(2), a qualified in-place UT examination over the volume from the inner bore of the flywheel to the circle one-half of the outer radius or a surface examination (MT and/or PT) of exposed surfaces of the removed flywheels may be conducted at approximately 10 year intervals coinciding with the Inservice Inspection schedule as required by ASME Section XI.

5.5 Programs and Manuals

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5.5.15 Safety Function Determination Program (SFDP) (continued)

- c. Provisions to ensure that an inoperable supported system's Completion Time is not inappropriately extended as a result of multiple support system inoperabilities; and
- d. Other appropriate limitations and remedial or compensatory actions.

A loss of safety function exists when, assuming no concurrent single failure, a safety function assumed in the accident analysis cannot be performed. For the purpose of this program, a loss of safety function may exist when a support system is inoperable, and:

- a. A required system redundant to the system(s) supported by the inoperable support system is also inoperable; or
- b. A required system redundant to the system(s) in turn supported by the inoperable supported system is also inoperable; or
- c. A required system redundant to the support system(s) for the supported systems (a) and (b) above is also inoperable.

The SFDP identifies where a loss of safety function exists. If a loss of safety function is determined to exist by this program, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered.

5.5.16 Containment Leakage Rate Testing Program

- a. A program shall be established to implement the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995, as modified by the following exceptions:
  - 1. The visual examination of containment concrete surfaces intended to fulfill the requirements of 10 CFR 50, Appendix J, Option B testing, will be performed in accordance with the requirements of and frequency specified by ASME Section XI Code, Subsection IWL, except where relief has been authorized by the NRC.

(continued)

5.5 Programs and Manuals

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5.5.16 Containment Leakage Rate Testing Program (continued)

2. The visual examination of the steel liner plant inside containment intended to fulfill the requirements of 10 CFR 50, Appendix J, Option B testing, will be performed in accordance with the requirements of and frequency specified by ASME Section XI Code, Subsection IWE, except where relief has been authorized by the NRC.
  - b. The peak calculated containment internal pressure for the design basis loss of coolant accident,  $P_a$ , is 48.1 psig.
  - c. The maximum allowable containment leakage rate,  $L_a$ , at  $P_a$ , shall be 0.20% of the containment air weight per day.
  - d. Leakage rate acceptance criteria are:
    1. Containment leakage rate acceptance criterion is  $\leq 1.0 L_a$ . During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are  $< 0.60 L_a$  for the Type B and C tests and  $\leq 0.75 L_a$  for Type A tests;
    2. Air lock testing acceptance criteria are:
      - a) Overall air lock leakage rate is  $\leq 0.05 L_a$  when tested at  $\geq P_a$ ;
      - b) For each door, leakage rate is  $\leq 0.005 L_a$  when pressurized to  $\geq 10$  psig.
  - e. The provisions of Technical Specification SR 3.0.2 do not apply to the test frequencies in the Containment Leakage Rate Testing Program.
  - f. The provisions of Technical Specification SR 3.0.3 are applicable to the Containment Leakage Rate Testing Program.
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Attachment 4

Proposed TS Bases Changes  
(for information only)

BASES (continued)

SURVEILLANCE  
REQUIREMENTS

SR 3.6.1.1

Insert B-1

Maintaining the containment OPERABLE requires compliance with the visual examinations and leakage rate test requirements of the Containment Leakage Rate Testing Program. Failure to meet air lock and purge valve with resilient seal leakage limits specified in LCO 3.6.2 and LCO 3.6.3 does not invalidate the acceptability of these overall leakage determinations unless their contribution to overall Type A, B, and C leakage causes that to exceed limits. As left leakage prior to the first startup after performing a required Containment Leakage Rate Testing Program leakage test is required to be  $< 0.6 L_a$  for combined Type B and C leakage and  $< 0.75 L_a$  for overall Type A leakage. At all other times between required leakage rate tests, the acceptance criteria is based on an overall Type A leakage limit of  $\leq 1.0 L_a$ . At  $\leq 1.0 L_a$  the offsite dose consequences are bounded by the assumptions of the safety analysis.

SR Frequencies are as required by the Containment Leakage Rate Testing Program. These periodic testing requirements verify that the containment leakage rate does not exceed the leakage rate assumed in the safety analysis.

SR 3.6.1.2

This SR ensures that the structural integrity of the containment will be maintained in accordance with the provisions of the Containment Tendon Surveillance Program. Testing and Frequency are consistent with Reference 4.

REFERENCES

1. 10 CFR 50, Appendix J, Option B.
2. FSAR, Chapter 15.
3. FSAR, Section 6.2.
4. FSAR Chapter 18.

in accordance with ASME code Section XI, subsection IWL (Ref. 4), and applicable addenda as required by 10 CFR 50.55a.

ASME Code Section XI, subsection IWL



### INSERT B-1

The containment concrete visual examinations may be performed during either power operations, or during a maintenance/refueling outage. The visual examinations of the steel liner plate inside containment are performed during maintenance or refueling outages as this is the only time the liner plate is fully accessible.

Attachment 5

List of Commitments

### LIST OF COMMITMENTS

The following table identifies those actions committed to by AmerenUE in Attachment 1 to this letter. Other statements in Attachment 1 to this letter are not considered to be regulatory commitments. Please direct questions regarding these commitments to Dave Shafer, Superintendent - Licensing, at (314) 554-3104.

COMMITMENT	Due Date/Event
Revision to the TS Bases will be implemented pursuant to the TS Bases Control Program, TS 5.5.14, upon implementation of this license amendment.	Upon implementation of amendment
The license amendment, as approved will be implemented within 90 days from date of issuance.	Within 90 days of date of issuance of amendment