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July 29, 2003  
RC-03-0159



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

ATTN: K. R. Cotton

Dear Sir/Madam:

Subject: VIRGIL C. SUMMER NUCLEAR STATION  
DOCKET NO. 50/395  
OPERATING LICENSE NO. NPF-12  
LICENSE AMENDMENT REQUEST - LAR 03-1864  
SURVEILLANCE REQUIREMENT 4.0.5 AND ASSOCIATED BASES

Reference: P. Campbell (NRC), NUREG-1482, "Guidelines for Inservice Testing at Nuclear Power Plants," April 1995.

Pursuant to 10 CFR 50.90, South Carolina Electric & Gas Company (SCE&G), acting for itself and as agent for South Carolina Public Service Authority, hereby requests an amendment to the Virgil C. Summer Nuclear Station (VCSNS) Technical Specifications (TS).

The proposed change will revise Surveillance Requirement 4.0.5 to reflect the deletion of Subsections IWP and IWV from the 2000 Addenda of ASME Section XI. This change will also result in revising the Bases for 4.0.5, 3/4.4.2 and 3/4.4.6 to reflect the applicability of the ASME OM Code to inservice testing activities.

Technical Specification 4.0.5 is also being revised as recommended by the NRC in Section 6 of the referenced document. This change was recommended when performing a periodic IST Program update to facilitate implementation of the revised IST Program. The regulation, 10 CFR 50.55a(f)(5)(iv), allows up to 12 months after the start of a new interval to demonstrate the impracticality of a pump or valve test to the Commission.

Technical Specification 4.0.5 (b) is also being revised to define the biennial frequency interval as discussed in Section 3.1.3 of NUREG-1482 and to define the increased frequency interval for Quarterly tested pumps that are in an alert status in accordance with the corrective action requirements of the ASME OM Code.

Bases 3/4.4.10 has been revised to delete "and testing" from the discussion of the Structural Integrity Program", and delete wording associated with obtaining relief in accordance with 10 CFR 50.55a(g)(6)(i). Inservice Inspection activities maintain the structural integrity of Code Class piping systems and supports. Inservice Testing activities assess the operational readiness of ASME Class 1,2 and 3 pumps and valves by monitoring critical performance parameters against baseline values.

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Pursuant to 10 CFR 50.91, the adoption of an NRC approved standard, the ASME OM Code, for the conduct of inservice testing activities poses no significant hazard as delineated by 10 CFR 50.92. Technical Specification 4.0.5 is being revised to reflect and incorporate the periodic update requirements of 10 CFR 50.55a(f)(4)(ii).

Information contained herein provides the No Significant Hazards Determination. Attachment I provides the TS page marked up with the proposed change. Attachment II provides the retyped TS pages.

The VCSNS Plant Safety Review Committee and the Nuclear Safety Review Committee have reviewed and approved the proposed change. SCE&G has notified the State of South Carolina in accordance with 10CFR50.91(b).

SCE&G requests approval of the proposed amendment by August 1, 2004, to support implementation of the 3<sup>rd</sup> Inservice Testing Interval surveillance program. Once approved, the amendment shall be implemented within 30 days.

There are no other TS changes in process that will affect or be affected by this change request. There are no significant changes to any FSAR or FPER sections.

If you have any questions or require additional information, please contact Mr. Ronald B. Clary at (803)-345-4757.

I certify under penalty of perjury that the foregoing is true and correct.

7/29/03  
Executed on

  
Stephen A. Byrne

JT/SAB/dr

Enclosures:

Evaluation of the proposed change

Attachment(s): 3

1. Proposed Technical Specification Change - Mark-up
2. Proposed Technical Specification Change - Retyped
3. List of Regulatory Commitments

c: N. O. Lorick  
N. S. Carns  
T. G. Eppink (w/o Attachments)  
R. J. White  
L. A. Reyes  
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RTS (LAR 03-1864)  
File (813.20)  
DMS (RC-03-0159)

**Subject: LICENSE AMENDMENT REQUEST - LAR 03-1864  
SURVEILLANCE REQUIREMENT 4.0.5 AND ASSOCIATED BASES**

**1.0 DESCRIPTION**

South Carolina Electric & Gas Company (SCE&G) requests an amendment to revise the Virgil C. Summer Nuclear Station (VCSNS) Technical Specifications (TS) Surveillance Requirements (SR). The proposed change to SR 4.0.5 and the Bases for 4.0.5, 3/4.4.2, 3/4.4.6 and 3/4.4.10 are being requested to support implementation of the Third Inservice Testing Program Interval, commencing on January 1, 2004. The proposed change will:

- a) Update SR 4.0.5 to reflect the deletion of Subsections IWP and IWV from ASME Section XI with the approval of the 2000 Addenda. The Bases for 4.0.5, 3/4.4.2 and 3/4.4.10 are also being revised to reflect the applicability of the ASME OM Code to inservice testing activities.
- b) Incorporate the recommendations of NUREG-1482, "Guidelines for Inservice Testing at Nuclear Power Plants," Section 6, "Revised Standard Technical Specifications," and revise SR 4.0.5 to facilitate implementation of the 3<sup>rd</sup> Interval IST Program.
- c) Add the ASME OM Code biennial frequency and increased frequency interval for quarterly tested pumps in an Alert status to SR 4.0.5 (b).
- d) Revise Bases 3/4.4.10 to clarify the applicability of ASME Section XI to inservice inspection activities and delete reference to Relief Request requirements, which are processed in accordance with the regulations under 10 CFR 50.55a.

These changes are required for compliance with the periodic IST Program update requirements of 10 CFR 50.55a(f)(4)(ii) and provide literal compliance with the VCSNS TS during the initial 12 months of the Inservice Testing Program, 3<sup>rd</sup> Interval.

**2.0 PROPOSED CHANGE**

Specifically the proposed changes would revise the following:

**2.1 TS 4.0.5 / Bases**

SR 4.0.5 and the Bases are being revised to reflect the applicability of ASME Section XI to the conduct of inservice inspection activities, and the ASME OM Code for inservice testing activities. The change will be accomplished by referencing the applicable Code and Addenda for these activities as required by 10 CFR 50.55a, and deleting specific reference to Section XI of the ASME Boiler and Pressure Vessel Code.

The Bases are also being revised to delete discussion associated with the TS definition of OPERABLE and the conflict with the ASME Boiler and Pressure Vessel Code

provision, which allows a 24-hour grace period before declaring a valve incapable of performing its specified function inoperable.

## 2.2 TS 4.0.5

TS 4.0.5 is being revised to delete "(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50, Section 50.55a(g)(6)(i)."

## 2.3 TS 4.0.5(b)

Additional terminologies for the conduct of inservice inspection and inservice testing activities are being defined. The frequencies include the biennial, or every 2 year frequency of the ASME OM Code and increased frequency interval for quarterly tested pumps in an ASME OM Code Alert status, where the corrective actions of the Code require "doubling" the testing frequency.

## 2.4 Bases 3/4.4.2

Reference to Section XI of the Boiler and Pressure Vessel Code is being deleted for overpressure device testing and replaced with the ASME OM Code.

## 2.5 Bases 3/4.4.6

Reference to the ASME Code, Section XI, Part OM-10 is being replaced by "the ASME OM Code."

## 2.6 Bases 3/4.4.10

The Bases is being revised to reflect the fact that maintaining the structural integrity of ASME Code Class 1, 2 and 3 components is an inservice inspection activity by deleting "and testing." References to Relief Request approval requirements will also be deleted from the Bases.

### **3.0 BACKGROUND**

Prior to issuance of the 2000 Addenda to the 1998 Edition of ASME Section XI of the ASME Boiler and Pressure Vessel Code, Subsections IWP and IWV referenced Parts 6 and 10 of the OMa-1988 OM Code for the conduct of inservice testing activities.

The VCSNS 3<sup>rd</sup> Interval for inservice inspection (ISI) and inservice testing (IST) activities will commence on January 1, 2004. The Code of record for 3<sup>rd</sup> Interval ISI activities is the ASME Section XI Boiler and Pressure Vessel Code, 1998 Edition through 2000 Addenda. The Code of record for 3<sup>rd</sup> Interval IST activities is the ASME OM Code, 1998 Edition through 2000 Addenda. The current plant Technical Specifications, SR 4.0.5, directs that inservice testing activities be conducted in accordance with ASME Section XI. Therefore, for compliance with the periodic IST Program update requirements of 10 CFR 50.55a(f)(4)(ii), TS 4.0.5 and the Bases require revision to reflect the applicable test Codes specified in 10 CFR 50.55a.

The Bases for SR 4.0.5 is also being revised to delete a cited example of a conflict with ASME Section XI and the TS definition of OPERABLE. The ASME Section XI Code will no longer be applicable to the conduct of inservice testing activities. In addition, the ASME OM Code does not contain a similar provision that would allow a 24-hour grace period before declaring a component incapable of performing its design function inoperable.

The requested license amendment also includes revising TS 4.0.5 as recommended in NUREG-1482, Section 6, "Revised Standard Technical Specifications." This Section of the NUREG recommended licensees amend TS 4.0.5 prior to the periodic IST Program update required for compliance with 10 CFR 50.55a(f)(4)(ii). The Code of Federal Regulations allows licensees up to 12 months after the start of a new interval to demonstrate the impracticality of new Code requirements. This change will eliminate a potential Technical Specification noncompliance during NRC review of Relief Requests from impractical ASME OM Code requirements submitted prior to the start of the new interval, and discovered during the early months of implementation. Similar Technical Specification revisions have been granted for other licensees, specifically Amendment 206 to Facility Operating License No. DPR-49-Duane Arnold Energy Center (TAC No. M90076).

Additional terminologies for inservice inspection and inservice testing activities are being added to TS 4.0.5(b). The biennial or 2 year frequency is being added, this addition is supported by NUREG-1482, Section 3.1.3 "Scheduling of Inservice Tests," and is based on the standard technical specifications which have been developed, reviewed and approved by the NRC staff.

The increased frequency for Quarterly inservice tested pumps in an Alert status has also been added to TS 4.0.5 (b). This frequency is currently not defined in the VCSNS Technical Specifications. The applicability of the 25% grace period to the increased frequency interval for pumps is supported by NUREG-1482, Page G-67, NRC response 6.2-2.

Bases 3/4.4.2 is being revised to reflect the requirement during the 3<sup>rd</sup> Inservice Testing interval to perform overpressure device testing to the ASME OM Code, replacing ASME Section XI for compliance with the periodic update requirements of 10 CFR 50.55a(f)(4)(ii).

Bases 3/4.4.6.2 is being revised to delete reference to Part OM-10 for the correction of RCS pressure isolation valve leakage collected at less than full functional differential pressures. Part 10 of the ASME OM Code is not applicable for the performance of valve inservice testing during the 3<sup>rd</sup> Interval due to the periodic update requirements of 10 CFR 50.55a(f)(4)(ii). OM Part 10, Paragraph 4.2.2.3(b)(4) and ISTC-3630(b)(4) of the ASME OM Code utilize the same correction equation for leakage rates collected at less than full functional differential pressure, therefore, this change does not alter any technical requirement.

Bases 3/4.4.10 is being revised to delete "and testing" from the discussion of the Structural Integrity Program, and delete wording associated with obtaining relief in accordance with 10 CFR 50.55a(g)(6)(i). Inservice Inspection activities maintain the structural integrity of Code Class piping systems and supports. Inservice testing activities monitor the operational readiness of components by monitoring critical performance parameters against baseline values. The requirements for relief are being deleted based on the fact that this requirement is covered by the regulation, 10 CFR 50.55a.

#### **4.0 TECHNICAL ANALYSIS**

The requested changes to TS 4.0.5 are required, in part, for compliance with the periodic IST Program update requirements of 10 CFR 50.55a(f)(4)(ii). The ASME OM Code, 1998 Edition through 2000 Addenda is an NRC approved standard, endorsed in the Federal Register. The OM Code includes many enhancements to improve the effectiveness of inservice testing activities, including the bi-directional testing of check valves (regardless of safety function position) and the Comprehensive testing of pumps to improve the detection of hydraulic degradation. The requested changes are also, in part, supported by NRC recommendations and positions published in NUREG-1482, "Guidelines for Inservice Testing at Nuclear Power Plants."

#### **5.0 REGULATORY SAFETY ANALYSIS**

##### **5.1 No Significant Hazards Consideration**

South Carolina Electric & Gas Company (SCE&G) has evaluated the proposed changes to the VCSNS TS described above against the significant Hazards Criteria of 10CFR50.92 and has determined that the changes do not involve any significant hazard. The following is provided in support of this conclusion.

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

Response: No.

The proposed change to TS 4.0.5 reflects NRC approval of the ASME Code, in 10CFR50.55a, for the conduct of Inservice Testing (IST). The current TS references use of ASME Section XI for this testing, which will no longer be applicable for the third IST interval. The adoption of an NRC approved test code, as required by 10CFR50.55a(f)(4)(ii) will not increase the probability of an accident previously evaluated. Testing is performed to ensure the operational readiness of pumps and valves to perform their safety functions.

The probability or consequences of accidents previously evaluated in the VCSNS FSAR are unaffected by this proposed change because there is no change to any equipment response or accident mitigation scenario. There are no additional challenges to fission product barrier integrity. 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 involves the adoption of an NRC approved Inservice Testing Code for the conduct of Operating License mandated testing. The adoption of the new Code is required to satisfy 10CFR50.55a(f)(4)(ii). The new Code enhances plant safety by requiring the bi-directional testing of check valves and comprehensive pump testing. These changes were incorporated to better monitor pumps and check valves for degradation. The adoption of the new Code does not create the possibility of a new or different kind of accident or malfunction.

No new accident scenarios, failure mechanisms, or limiting single failures are introduced as a result of the proposed change. The proposed change does not challenge the performance or integrity of any safety-related system. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

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

Response: No.

The margin of safety associated with the acceptance criteria of any accident is unchanged. The proposed change will have no affect on the availability, operability, or performance of the safety-related systems and components. A change to the surveillance requirement is proposed, but the ASME OM Code is an NRC approved standard incorporating inservice testing enhancements not contained in ASME Section XI.

Pursuant to 10 CFR 50.91, the preceding analyses provide a determination that the proposed Technical Specifications change poses no significant hazard as delineated by 10 CFR 50.92.

## 5.2 Applicable Regulatory Requirements/Criteria

10 CFR 50.55a(f), "Inservice Testing Requirements," in 10 CFR 50.55a(f)(4)(ii) requires that inservice tests to verify operational readiness of pumps and valves, whose function is required for safety, conducted during successive 120-month intervals must comply with the requirements of the latest edition and addenda of the code incorporated by reference in 10CFR50.55a twelve months prior to the start of the 120-month interval, subject to the limitations of 10CFR50.55a.

10 CFR 50.36(c)(3), "Surveillance Requirements," stipulates that surveillances be performed to assure the necessary quality of systems and components be maintained, the facility operation will be within safety limits, and that the limiting condition for operation will be met.

10 CFR 50 Appendix A, Criterion 1, "Quality Standards and Records," requires that structures, systems, and components important to safety shall be designed, fabricated, erected, and tested to quality standards commensurate with the importance of the safety functions to be performed. Where generally recognized codes and standards are used, they shall be identified and evaluated to determine their applicability, adequacy, and sufficiency and shall be supplemented or modified as necessary to assure a quality product in keeping with the required safety function.

The proposed change does not violate any requirement or recommended method for assuring and maintaining the plant design and licensing basis.

### 5.2.1 Regulations

The regulatory basis for TS 4.0.5, is to ensure that inservice inspection of ASME Code Class 1, 2, and 3 components and inservice testing of ASME Code Class 1, 2, and 3 pumps and valves will be performed in accordance with a periodically updated version of the ASME Code and addenda as required by 10CFR50.55a.

### 5.2.2 Design Bases (FSAR)

#### FSAR Section 5.7.1, APPLICABLE CODES AND STANDARDS

FSAR 5.7.1.3, Second and Successive Inspection Intervals, states that the second 10 year interval and successive intervals will meet the requirements of

the applicable ASME Codes prescribed by 10CFR50.55a. As later editions are incorporated into 10CFR50.55a, the provisions of the later Codes may be incorporated, in part or whole, in future intervals inspection. The inservice inspection plans will designate the applicable edition and addenda to the corresponding inspection items.

Deviations from the Code requirements are allowed and/or prescribed by various means. These deviations may be permitted via NRC approved Relief Requests, Code Cases which are adopted by the NRC in various Regulatory Guides, Generic letters, and exceptions described in 10CFR50.55a. Any deviations from the Code requirements will be documented in the inservice inspection program (i.e., ISI, IST, and Repair and Replacement).

### 5.2.3 Approved Methodologies

The proposed change involves the adoption of an NRC approved Inservice Testing Code for the conduct of Operating License mandated testing. The adoption of the new Code is required to satisfy 10CFR50.55a(f)(4)(ii). The new Code enhances plant safety by requiring the bi-directional testing of check valves and comprehensive pump testing. These changes were incorporated to better monitor pumps and check valves for degradation. The methodology for the inspections and testing prescribed by the Code have been accepted by the NRC and noted in 10CFR50.55a.

### 5.2.4 Analysis

The requested changes to TS 4.0.5 are required, in part, for compliance with the periodic IST Program update requirements of 10 CFR 50.55a(f)(4)(ii). The ASME OM Code, 1998 Edition through 2000 Addenda is an NRC approved standard, endorsed in the Federal Register. The OM Code includes many enhancements to improve the effectiveness of inservice testing activities, including the bi-directional testing of check valves (regardless of safety function position) and the Comprehensive testing of pumps to improve the detection of hydraulic degradation. The requested changes are also, in part, supported by NRC recommendations and positions published in NUREG-1482, "Guidelines for Inservice Testing at Nuclear Power Plants." The proposed change is within the current regulatory position on inservice inspections and testing.

### 5.2.5 Conclusion

The technical analysis performed by SCE&G demonstrates that the proposed amendment has no impact on prescribed inservice inspection and testing activities. Therefore, the proposed License amendment is in compliance with 10CFR50.55a.

## **6.0 ENVIRONMENTAL CONSIDERATION**

SCE&G 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 (Reference 3), or would change an inspection or surveillance requirement. SCE&G has evaluated the proposed change and has determined that the change does not involve, (i) a significant hazards consideration, (ii) a significant change in the types of or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. As discussed above, the proposed changes do not involve a significant hazards consideration. Accordingly, the proposed change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51 (Reference 4), specifically 10 CFR 51.22(c)(9). Therefore, pursuant 10 CFR 51.22(b), an environmental assessment of the proposed change is not required.

## **7.0 REFERENCES**

1. NUREG-1482, Guidelines for Inservice Testing at Nuclear Power Plants, April 1995.
2. 10 CFR 50.55a.
3. 10 CFR 20
4. 10 CFR 51

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**ATTACHMENT 1**

**PROPOSED TECHNICAL SPECIFICATION CHANGES (MARK-UP)**

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**Attachment to License Amendment No. XXX**  
**To Facility Operating License No. NPF-12**  
**Docket No. 50-395**

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

<u>Remove Pages</u>	<u>Insert Pages</u>
3/4 0-2	3/4 0-2
3/4 0-3	3/4 0-3
B 3/4 0-3	B 3/4 0-3
B 3/4 4-2	B 3/4 4-2
B 3/4 4-5	B 3/4 4-5
B 3/4 4-15	B 3/4 4-15

**SCE&G -- EXPLANATION OF CHANGES**

<u>Page</u>	<u>Affected Section</u>	<u>Bar #</u>	<u>Description of Change</u>	<u>Reason for Change</u>
3/4 0-2	4.0.5a. 4.0.5b.	1	Rewrite of 4.0.5 - a.,b. - Reworded to remove reference to Section XI. a. - Removed prescriptive relief statement.	General reference to ASME Code encompasses Section XI and OM Code for all inservice testing and inspection requirements.
3/4 0-3	4.0.5b. 4.0.5e.	1	Rewrite of 4.0.5 - b. - Remove specific reference to Boiler and Pressure Vessel Code; Added double the quarterly and biennial frequency. e. - Remove specific reference to Boiler and Pressure Vessel Code.	General reference to ASME Code encompasses Section XI and OM Code for all inservice testing and inspection requirements and to add frequency definitions applicable to ASME OM Code.

**SCE&G – EXPLANATION OF CHANGES**

<u>Page</u>	<u>Affected Section</u>	<u>Bar #</u>	<u>Description of Change</u>	<u>Reason for Change</u>
B 3/4 0-3	4.0.5	1	Rewrite of 4.0.5 - Remove specific reference to Boiler and Pressure Vessel Code. Identified ASME OM Code for pump and valve surveillances.	General reference to ASME Code encompasses Section XI and OM Code for all inservice testing and inspection requirements.
B 3/4 4-2	3/4.4.2	1	Remove specific reference to Boiler and Pressure Vessel Code. Identified ASME OM Code for valve surveillances.	ASME OM Code is appropriate 3 <sup>rd</sup> interval Code for valve surveillances.
B 3/4 4-5	3/4.4.6	1	Remove specific reference to Boiler and Pressure Vessel Code. Identified ASME OM Code for valve surveillances.	ASME OM Code is appropriate 3 <sup>rd</sup> interval Code for valve surveillances.
B 3/4 4-15	3/4.4.10	1	Rewrite to remove reference to 10CFR50.55a(g)(6)(i) prescriptive relief statement.	In accordance with current 10CFR50.55a(g).

## APPLICABILITY

### SURVEILLANCE REQUIREMENTS

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4.0.1 Surveillance Requirements shall be applicable during the OPERATIONAL MODES or other conditions specified for individual Limiting Conditions for Operation unless otherwise stated in an individual Surveillance Requirement.

4.0.2 Each Surveillance Requirement shall be performed within the specified surveillance interval with a maximum allowable extension not to exceed 25 percent of the specified surveillance interval.

4.0.3 If it is discovered that a Surveillance was not performed within its specified frequency, as defined by Specification 4.0.2, then compliance with the requirement to declare the LCO not met may be delayed, from the time of discovery, up to 24 hours or up to the limit of the specified frequency, whichever is greater. This delay period is permitted to allow performance of the surveillance. A risk evaluation shall be performed for any Surveillance delayed greater than 24 hours and the risk impact shall be managed.

If the Surveillance is not performed within the delay period, the LCO must immediately be declared not met, and the applicable Action(s) must be entered.

When the Surveillance is performed within the delay period and the Surveillance is not met, the LCO must immediately be declared not met, and the applicable Action(s) must be entered.

4.0.4 Entry into an OPERATIONAL MODE or other specified condition shall not be made unless the Surveillance Requirement(s) associated with the Limiting Condition for Operation have been performed within the stated surveillance interval or as otherwise specified. This provision shall not prevent passage through or to OPERATIONAL MODES as required to comply with ACTION requirements.

4.0.5 Surveillance Requirements for inservice inspection and testing of ASME Code Class 1, 2, and 3 components shall be applicable as follows:

- a. Inservice inspection of ASME Code Class 1/2 and 3 components and inservice testing of ASME Code Class 1, 2 and 3 pumps and valves shall be performed in accordance <sup>with</sup> Section XI of the ASME Boiler and Pressure Vessel Code and <sup>applicable</sup> Addenda as required by 10 CFR 50, Section 50.55a(g), ~~except where specific written relief has been granted by the Commission pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).~~
- b. Surveillance intervals specified in <sup>applicable</sup> Section XI of the ASME Boiler and Pressure Vessel Code and ~~applicable~~ Addenda for the inservice inspection and testing activities required by the ASME Boiler and Pressure Vessel Code and ~~applicable~~ Addenda shall be applicable as follows in these Technical Specifications:

APPLICABILITY

SURVEILLANCE REQUIREMENTS (Continued)

4.0.5 (continued)

~~ASME Boiler and Pressure Vessel Code and applicable Addenda-terminology for inservice inspection and testing activities~~

Required frequencies for performing inservice inspection and testing activities

Weekly  
Monthly  
Quarterly or every 3 months  
Semiannually or every 6 months  
Every 9 months  
Yearly or annually  
~~Biennially or every 2 years~~

At least once per 7 days  
At least once per 31 days  
At least once per 92 days  
At least once per 184 days  
At least once per 276 days  
At least once per 366 days  
~~At least once per 731 days~~

- c. The provisions of Specification 4.0.2 are applicable to the above required frequencies for performing inservice inspection and testing activities.
- d. Performance of the above inservice inspection and testing activities shall be in addition to other specified Surveillance Requirements.
- e. Nothing in the <sup>applicable</sup> ~~ASME Boiler and Pressure Vessel Code~~ shall be construed to supersede the requirements of any Technical Specification.

Double the Quarterly (3 month) frequency At least once per 46 days.

## APPLICABILITY

### BASES

4.0.5 This specification ensures that inservice inspection of ASME Code Class 1, 2 and 3 components and inservice testing of ASME Code Class 1, 2 and 3 pumps and valves will be performed in accordance with a periodically updated ~~version of Section XI of the ASME Boiler and Pressure Vessel Code and Addenda as required by 10 CFR 50.55a.~~ Relief from any of the above requirements has been provided ~~in writing by the Commission~~ and is not a part of these Technical Specifications. *(accordance with the regulation)*

This specification includes a clarification of the frequencies for performing the inservice inspection and testing activities required by ~~Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda.~~ This clarification is provided to ensure consistency in surveillance intervals throughout these Technical Specifications and to remove any ambiguities relative to the frequencies for performing the required inservice inspection and testing activities. 10CFR 50.55a

*OM*  
Under the terms of this specification, the more restrictive requirements of the Technical Specifications take precedence over the ~~ASME Boiler and Pressure Vessel Code and applicable Addenda.~~ For example, the requirements of Specification 4.0.4 to perform surveillance activities prior to entry into an OPERATIONAL MODE or other specified applicability condition takes precedence over the ~~ASME Boiler and Pressure Vessel Code~~ provision which allows pumps to be tested up to one week after return to normal operation. ~~And for example, the Technical Specification definition of OPERABLE does not grant a grace period before a device that is not capable of performing its specified function is declared inoperable and takes precedence over the ASME Boiler and Pressure Vessel Code provision which allows a valve to be incapable of performing its specified function for up to 24 hours before being declared inoperable.~~

*In accordance with 10CFR 50.55a, inservice inspection activities will be conducted in accordance with Section XI of the ASME Boiler and Pressure Vessel Code, inservice testing activities will be conducted in accordance with the ASME Operation and Maintenance (OM) Code.*

## REACTOR COOLANT SYSTEM

### BASES

#### 3/4.4.2 SAFETY VALVES

The pressurizer code safety valves operate to prevent the RCS from being pressurized above its Safety Limit of 2735 psig. Each safety valve is designed to relieve 420,000 lbs per hour of saturated steam at the valve set point plus 3% accumulation. The relief capacity of a single safety valve is adequate to relieve any overpressure condition which could occur during shutdown. In the event that no safety valves are OPERABLE, an operating RHR loop, connected to the RCS, provides overpressure relief capability and will prevent RCS over-pressurization.

During operation, all pressurizer code safety valves must be OPERABLE to prevent the RCS from being pressurized above its safety limit of 2735 psig. The combined relief capacity of all of these valves is greater than the maximum surge rate resulting from a complete loss of load assuming no reactor trip until the first Reactor Protective System trip set point is reached (i.e., no credit is taken for a direct reactor trip on the loss of load) and also assuming no operation of the power operating relief valves or steam dump valves.

Demonstration of the safety valves' lift settings will be performed in accordance with the provisions of Section XI of the ASME Boiler and Pressure Code. OM

#### 3/4.4.3 PRESSURIZER

The limit on the maximum water volume in the pressurizer assures that the parameter is maintained within the normal steady state envelope of operation assumed in the SAR. The limit is consistent with the initial SAR assumptions. The 12 hour periodic surveillance is sufficient to ensure that the parameter is restored to within its limit following expected transient operation. The maximum water volume also ensures that a steam bubble is formed and thus the RCS is not a hydraulically solid system. The requirement that a minimum number of pressurizer heaters be OPERABLE enhances the capability of the plant to control Reactor Coolant System pressure and establish natural circulation.

#### 3/4.4.4 RELIEF VALVES (PORVs)

The pressurizer power operated relief valves (PORVs) and steam bubble function to relieve RCS pressure during all design transients up to and including the design step load decrease with steam dump. The PORVs and block valves may be used to depressurize the RCS when normal pressurizer spray is unavailable. Operation of the air operated PORVs minimizes the undesirable opening of the spring loaded pressurizer code safety valves. Each PORV has a remotely controlled motor-operated block valve to provide a positive shutoff capability should a relief valve become inoperable. The series arrangement of the PORV and its associated block valve permit surveillance while at power.

## REACTOR COOLANT SYSTEM

### BASES

#### OPERATIONAL LEAKAGE (Continued)

The PIV leakage limit is 0.5 GPM per nominal inch of valve size with a maximum limit of 5 GPM. The NRC, through NUREG-1431, has endorsed this PIV leakage rate limit.

The surveillance requirements for RCS Pressure Isolation Valves provide added assurance of valve integrity thereby reducing the probability of gross valve failure and consequent intersystem LOCA. Leakage from the RCS Pressure Isolation Valves is IDENTIFIED LEAKAGE and will be considered as a portion of the allowed limit.

Leakage from the RCS Pressure Isolation Valves may be identified by surveillance testing performed during plant heatup or cooldown above 2000 psig and may be adjusted to obtain the leakage value at  $2235 \pm 20$  psig using calculation guidance provided by ASME Code, Section XI, Part OM-10. *the OM*

The total steam generator tube leakage limit of 1 GPM for all steam generators not isolated from the RCS ensures that the dosage contribution from the tube leakage will be limited to a small fraction of Part 100 limits in the event of either a steam generator tube rupture or steam line break. The 1 GPM limit is consistent with the assumptions used in the analysis of these accidents. The 500 gpd leakage limit per steam generator ensures that steam generator tube integrity is maintained in the event of a main steam line rupture or under LOCA conditions.

PRESSURE BOUNDARY LEAKAGE of any magnitude is unacceptable since it may be indicative of an impending gross failure of the pressure boundary. Therefore, the presence of any PRESSURE BOUNDARY LEAKAGE requires the unit to be promptly placed in COLD SHUTDOWN.

#### 3/4.4.7 CHEMISTRY

The limitations on Reactor Coolant System chemistry ensure that corrosion of the Reactor Coolant System is minimized and reduces the potential for Reactor Coolant System leakage or failure due to stress corrosion. Maintaining the chemistry within the Steady State Limits provides adequate corrosion protection to ensure the structural integrity of the Reactor Coolant System over the life of the plant. The associated effects of exceeding the oxygen, chloride and fluoride limits are time and temperature dependent. Corrosion studies show that operation may be continued with contaminant concentration levels in excess of the Steady State Limits, up to the Transient Limits, for the specified limited time intervals without having a significant effect on the structural integrity of the Reactor Coolant System. The time interval permitting continued operation within the restrictions of the Transient Limits provides time for taking corrective actions to restore the contaminant concentrations to within the Steady State Limits.

The surveillance requirements provide adequate assurance that concentrations in excess of the limits will be detected in sufficient time to take corrective action.

## REACTOR COOLANT SYSTEM

### BASES

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#### 3/4.4.10 STRUCTURAL INTEGRITY

The inservice inspection ~~and testing~~ programs for ASME Code Class 1, 2 and 3 components ensure that the structural integrity and operational readiness of these components will be maintained at an acceptable level throughout the life of the plant. These programs are in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR Part 50.55a(g), ~~except where specific written relief has been granted by the Commission pursuant to 10 CFR Part 50.55a (g) (6) (i).~~

Components of the reactor coolant system were designed to provide access to permit inservice inspections in accordance with Section XI of the ASME Boiler and Pressure Vessel Code, 1974 Edition.

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**ATTACHMENT II**

**PROPOSED TECHNICAL SPECIFICATION CHANGES (RETYPE)**

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## APPLICABILITY

### SURVEILLANCE REQUIREMENTS

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4.0.1 Surveillance Requirements shall be applicable during the OPERATIONAL MODES or other conditions specified for individual Limiting Conditions for Operation unless otherwise stated in an individual Surveillance Requirement.

4.0.2 Each Surveillance Requirement shall be performed within the specified surveillance interval with a maximum allowable extension not to exceed 25 percent of the specified surveillance interval.

4.0.3 If it is discovered that a Surveillance was not performed within its specified frequency, as defined by Specification 4.0.2, then compliance with the requirement to declare the LCO not met may be delayed, from the time of discovery, up to 24 hours or up to the limit of the specified frequency, whichever is greater. This delay period is permitted to allow performance of the surveillance. A risk evaluation shall be performed for any Surveillance delayed greater than 24 hours and the risk impact shall be managed.

If the Surveillance is not performed within the delay period, the LCO must immediately be declared not met, and the applicable Action(s) must be entered.

When the Surveillance is performed within the delay period and the Surveillance is not met, the LCO must immediately be declared not met, and the applicable Action(s) must be entered.

4.0.4 Entry into an OPERATIONAL MODE or other specified condition shall not be made unless the Surveillance Requirement(s) associated with the Limiting Condition for Operation have been performed within the stated surveillance interval or as otherwise specified. This provision shall not prevent passage through or to OPERATIONAL MODES as required to comply with ACTION requirements.

4.0.5 Surveillance Requirements for inservice inspection and testing of ASME Code Class 1, 2, and 3 components shall be applicable as follows:

- a. Inservice inspection of ASME Code Class 1, 2 and 3 components and inservice testing of ASME Code Class 1, 2 and 3 pumps and valves shall be performed in accordance the applicable ASME Code and Addenda as required by 10 CFR 50, Section 50.55a.
- b. Surveillance intervals specified for the inservice inspection and testing activities required by the applicable ASME Code and Addenda shall be applicable as follows in these Technical Specifications:

**APPLICABILITY**

**SURVEILLANCE REQUIREMENTS (Continued)**

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**4.0.5 (continued)**

<b>ASME Code terminology for inservice inspection and testing activities</b>	<b>Required frequencies for performing inservice inspection and testing activities</b>
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Double the Quarterly (3 month) frequency	At least once per 46 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days
Biennially or every 2 years	At least once per 731 days.

- c. The provisions of Specification 4.0.2 are applicable to the above required frequencies for performing inservice inspection and testing activities.
- d. Performance of the above inservice inspection and testing activities shall be in addition to other specified Surveillance Requirements.
- e. Nothing in the applicable ASME Code shall be construed to supersede the requirements of any Technical Specification.

## APPLICABILITY

### BASES

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4.0.5 This specification ensures that inservice inspection of ASME Code Class 1, 2 and 3 components and inservice testing of ASME Code Class 1, 2 and 3 pumps and valves will be performed in accordance with a periodically updated ASME Code and Addenda as required by 10 CFR 50.55a. In accordance with 10 CFR 50.55a, inservice inspection activities will be conducted in accordance with Section XI of the ASME Boiler and Pressure Vessel Code, inservice testing activities will be conducted in accordance with the ASME Operation and Maintenance (OM) Code. Relief from any of the above requirements has been provided in accordance with the regulation and is not a part of the Technical Specifications.

This specification includes a clarification of the frequencies for performing the inservice inspection and testing activities required by 10 CFR 50.55a. This clarification is provided to ensure consistency in surveillance intervals throughout these Technical Specifications and to remove any ambiguities relative to the frequencies for performing the required inservice inspection and testing activities.

Under the terms of this specification, the more restrictive requirements of the Technical Specifications take precedence over the ASME Code and applicable Addenda. For example, the requirements of Specification 4.0.4 to perform surveillance activities prior to entry into an OPERATIONAL MODE or other specified applicability condition takes precedence over the ASME OM Code provision which allows pumps to be tested up to one week after return to normal operation.

## REACTOR COOLANT SYSTEM

### BASES

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#### 3/4.4.2 SAFETY VALVES

The pressurizer code safety valves operate to prevent the RCS from being pressurized above its Safety Limit of 2735 psig. Each safety valve is designed to relieve 420,000 lbs per hour of saturated steam at the valve set point plus 3% accumulation. The relief capacity of a single safety valve is adequate to relieve any overpressure condition which could occur during shutdown. In the event that no safety valves are OPERABLE, an operating RHR loop, connected to the RCS, provides overpressure relief capability and will prevent RCS overpressurization.

During operation, all pressurizer code safety valves must be OPERABLE to prevent the RCS from being pressurized above its safety limit of 2735 psig. The combined relief capacity of all of these valves is greater than the maximum surge rate resulting from a complete loss of load assuming no reactor trip until the first Reactor Protective System trip set point is reached (i.e., no credit is taken for a direct reactor trip on the loss of load) and also assuming no operation of the power operating relief valves or steam dump valves.

Demonstration of the safety valves' lift settings will be performed in accordance with the provisions of the ASME OM Code.

#### 3/4.4.3 PRESSURIZER

The limit on the maximum water volume in the pressurizer assures that the parameter is maintained within the normal steady state envelope of operation assumed in the SAR. The limit is consistent with the initial SAR assumptions. The 12 hour periodic surveillance is sufficient to ensure that the parameter is restored to within its limit following expected transient operation. The maximum water volume also ensures that a steam bubble is formed and thus the RCS is not a hydraulically solid system. The requirement that a minimum number of pressurizer heaters be OPERABLE enhances the capability of the plant to control Reactor Coolant System pressure and establish natural circulation.

#### 3/4.4.4 RELIEF VALVE (PORVs)

The pressurizer power operated relief valves (PORVs) and steam bubble function to relieve RCS pressure during all design transients up to and including the design step load decrease with steam dump. The PORVs and block valves may be used to depressurize the RCS when normal pressurizer spray is unavailable. Operation of the air operated PORVs minimizes the undesirable opening of the spring loaded pressurizer code safety valves. Each PORV has a remotely controlled motor-operated block valve to provide a positive shutoff capability should a relief valve become inoperable. The series arrangement of the PORV and its associated block valve permit surveillance while at power.

## REACTOR COOLANT SYSTEM

### BASES

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#### OPERATIONAL LEAKAGE (Continued)

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PRESSURE BOUNDARY LEAKAGE of any magnitude is unacceptable since it may be indicative of an impending gross failure of the pressure boundary. Therefore, the presence of any PRESSURE BOUNDARY LEAKAGE requires the unit to be promptly placed in COLD SHUTDOWN.

#### 3/4.4.7 CHEMISTRY

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## REACTOR COOLANT SYSTEM

### BASES

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#### 3/4.4.10 STRUCTURAL INTEGRITY

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Components of the reactor coolant system were designed to provide access to permit inservice inspections in accordance with Section XI of the ASME Boiler and Pressure Vessel Code, 1974 Edition.

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**ATTACHMENT III  
LIST OF REGULATORY COMMITMENTS**

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There are no regulatory commitments created due to this License Amendment Request. The proposed change allows an updated Code application to an existing inspection commitment.