

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

November 4, 2004

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Serial No. 04-666
NL&OS/ETS R0
Docket Nos. 50-280
50-281
License Nos. DPR-32
DPR-37

VIRGINIA ELECTRIC AND POWER COMPANY (DOMINION)
SURRY POWER STATION UNITS 1 AND 2
PROPOSED TECHNICAL SPECIFICATIONS CHANGE REQUEST
RELOCATION OF INSERVICE INSPECTION AND TESTING REQUIREMENTS

Pursuant to 10 CFR 50.90, Virginia Electric and Power Company requests an amendment to Facility Operating License Numbers DPR-32 and DPR-37 in the form of changes to the Technical Specifications for Surry Power Station Units 1 and 2. The proposed changes will relocate the inservice testing requirements, remove the inservice inspection requirements, and establish a Bases Control Program consistent with Improved Technical Specifications. A discussion of the proposed changes is included in Attachment 1. Marked-up pages that identify the proposed changes and the Technical Specification pages that incorporate the proposed changes are provided in Attachments 2 and 3, respectively. Technical Specification Bases changes associated with the proposed changes are provided for information only. The Technical Specification Bases changes will be implemented following NRC approval of the license amendment.

The proposed changes have been reviewed and approved by the Station Nuclear Safety and Operating Committee and the Management Safety Review Committee.

In accordance with the requirements of 10 CFR 50.92, the enclosed application is judged to involve no significant hazards. In addition, the proposed change has been determined to qualify for categorical exclusion from an environmental assessment as set forth in 10 CFR 51.22(c)(9). The basis for these determinations is also included in Attachment 1.

Pursuant to 10 CFR 50.55a(f)(5)(ii) requirements, to avoid a conflict between inservice testing requirements stated in the Technical Specifications and the approved Inservice Testing Programs, Dominion requests approval of the proposed changes by May of 2005. The approved Technical Specifications will be implemented within 30 days of approval by the NRC staff.

Should you have any questions or require additional information, please contact Mr. Thomas Shaub at (804) 273-2763.

Very truly yours,

A handwritten signature in black ink, appearing to read 'L. Hartz', with a stylized flourish at the end.

Leslie N. Hartz
Vice President – Nuclear Engineering

Attachments

Commitments made in this letter: None

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(SEAL)

Attachment 1

**Proposed Technical Specification Changes For
Inservice Testing and Bases Control Program**

Discussion of Change

**Surry Power Station Units 1 and 2
Virginia Electric and Power Company
(Dominion)**

DISCUSSION OF CHANGE

INTRODUCTION

Pursuant to 10 CFR 50.90, Virginia Electric and Power Company (Dominion) requests changes to the Technical Specifications (TS) for Surry Power Station Units 1 and 2. The proposed changes will: 1) delete TS 4.0.5, which includes the Inservice Inspection (ISI) and Inservice Testing (IST) requirements; 2) relocate the IST requirements to the administrative section of TS as a program and revise the associated TSs to reference the IST program instead of TS 4.0.5; 3) deletes the inservice inspection surveillance requirements and individual TS references to the ISI program since these requirements are included in 10 CFR 50.55a; and, 4) add a TS Bases Control Program to the Administrative Controls section of the TS. The changes associated with the IST program are required pursuant to 10 CFR 50.55a(f)(5)(ii) to eliminate an inconsistency between the TS and the approved ASME Code. Furthermore, these ISI and IST changes are consistent with NUREG-1431, (Improved) Standard Technical Specifications for Westinghouse Plants. The associated Bases are also being revised and are included for information.

The proposed changes have been reviewed, and it has been determined that no significant hazards consideration exists as defined in 10 CFR 50.92. In addition, it has been determined that the change qualifies for categorical exclusion from an environmental assessment as set forth in 10 CFR 51.22(c)(9); therefore, no environmental impact statement or environmental assessment is needed in connection with the approval of the proposed change.

BACKGROUND AND DISCUSSION OF CHANGE

Inservice Inspection and Testing Programs

TS 4.0.5 establishes the surveillance requirements for inservice inspection and testing of ASME Class 1, 2 and 3 components for Surry Power Station Units 1 and 2. Regarding inservice testing (IST), TS 4.0.5.a currently states that:

“Inservice Testing of ASME Code Class 1, 2, and 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(f), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50, Section 50.55a(f)(6)(i).”

The regulations in 10 CFR 50.55a(f)(4) establish the effective Code edition and addenda to be used by licensees for performing inservice testing of pumps and valves. Pursuant to 10 CFR 50.55a(f)(4)(ii), Virginia Electric and Power Company (Dominion) submitted the fourth interval IST programs for Surry Power Station Units 1 and 2 to the

NRC in a letter June 25, 2003 (Serial No. 03-354). The IST Programs for the fourth interval were updated to comply with the appropriate revisions of the ASME Code for Operation and Maintenance of Nuclear Power Plants and included the 1998 Edition, the 1999 Addenda and the 2000 Addenda as the new Code of Record for performing IST at Surry Units 1 and 2. As a consequence, the TS 4.0.5 reference to Section XI of the ASME Code results in a reference to a deleted portion of the Code.

According to 10 CFR 50.55a(f)(5)(ii), "If a revised inservice test 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. The licensee shall submit this application, as specified in §50.4, at least 6 months before the start of the period during which the provisions become applicable, as determined by paragraph (f)(4) of this section."

Since TS 4.0.5 and several Technical Specifications reference ASME Section XI for the IST requirements for pumps and valves, the Surry Units 1 and 2 TS require revision to change the IST code references from ASME Section XI to the ASME Code for Operation and Maintenance of Nuclear Power Plants. For consistency with the Improved Technical Specifications (ITS), TS 4.0.5 will be relocated as an IST Program in the Administrative Section of TSs. In addition, those Technical Specifications that reference TS 4.0.5 will be changed to reference the new IST program.

Regarding inservice inspection (ISI), TS 4.0.5.a currently states that:

"Inservice inspection of ASME Code Class 1, 2, and 3 components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable 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)."

When the ITS were developed the Inservice inspection requirements were removed since they were identical to the 10 CFR 50.55a requirements and were therefore, considered redundant. Thus, the ISI requirements of TS 4.0.5 are being deleted, consistent with Improved Technical Specifications.

TS Bases Control Program

The TS changes that are approved by the NRC Consolidated Line Item Improvement Program (CLIP) often include the requirement for a TS Bases Control Program as a condition for implementing a particular Technical Specification Task Force (TSTF) traveler (e.g., TSTF 358 associated with missed surveillances, TSTF-359 associated with mode changes). As it is anticipated that future CLIP opportunities will invoke a similar requirement for a TS Bases Control Program and for consistency with ITS and

existing station administrative procedures, it is desirable to include such a program in Surry's custom Technical Specifications.

SPECIFIC CHANGES

The following changes are proposed to move the IST requirements to a program in the Administrative Section of TS consistent with Improved Technical Specifications:

- TS 4.0.5 is being relocated to Section 6 as an Inservice Testing Program and revised to include the appropriate ASME Code reference. In addition, the Inservice Inspection requirements in TS 4.0.5 are being deleted consistent with Improved Technical Specifications.

Delete: TS 4.0.5 and the associated Bases

Insert: replace with the following IST Program in Section 6.

6.4.1 Inservice Testing Program

This program provides controls for inservice testing of ASME Code Class 1, 2, and 3 components. The program shall include the following:

1. Testing frequencies specified in the ASME Code for Operation and Maintenance of Nuclear Power Plants and applicable Addenda as follows:

ASME Code for Operation and
Maintenance of Nuclear Power
Plants and applicable Addenda
terminology for inservice
testing activities

Quarterly or every 3 months
Yearly or annually
Biennially or every 2 years
Every 4 years
Every 5 years
Every 8 years
Every 10 years
Once per fuel cycle (18 months)
Every cold shutdown
Every refueling outage

Required Frequencies for
performing inservice
testing activities

At least once per 92 days
At least once per 366 days
At least once per 731 days
At least once per 1461 days
At least once per 1827 days
At least once per 2922 days
At least once per 3653 days
At least once per 549 days
Every cold shutdown
Every refueling outage

2. The provisions of TS 4.0.2 are applicable to the above required Frequencies for performing inservice testing activities;

3. The provisions of TS 4.0.3 are applicable to inservice testing activities; and
4. Nothing in the ASME Code for Operation and Maintenance of Nuclear Power Plants shall be construed to supersede the requirements of any TS.

The frequencies identified in the table above are those identified in the ASME Code for Operation and Maintenance of Nuclear Power Plants.

The following TS are revised to refer to the Inservice Testing Program in place of TS 4.0.5:

- ✓ TS 4.1.B.1 – Pressurizer PORVs and Block Valves
 - ✓ TS Table 4.1-2A Item 4 – Pressurizer Safety Valves
 - ✓ TS Table 4.1-2A Item 5 – Main Steam Safety Valves
 - ✓ TS 4.5.A.1 – Containment Spray pumps
 - ✓ TS 4.5.A.2 – Containment Spray valves
 - ✓ TS 4.5.B.1 – Recirculation Spray pumps
 - ✓ TS 4.5.B.1 – Recirculation Spray valves
 - ✓ TS 4.8.A.2.a – AFW valves
 - ✓ TS 4.8.A.3.a – AFW pumps
 - ✓ TS 4.8.A.5.b – AFW cross connect valves
 - ✓ TS 4.11.C.1 – Safety Injection Subsystem low head pumps
 - ✓ TS 4.11.C.2 – Safety Injection Subsystem charging pumps
 - ✓ TS 4.11.C.3 – Safety Injection Subsystem valves
- The following TS are revised to eliminate reference to ASME Section XI. Section XI is no longer the appropriate ASME Code of reference for the Inservice Testing Program.
 - ✓ TS 4.8.B – Acceptance Criteria
- The following TS are revised due to the removal of the ISI program requirements from the TS:
 - ✓ TS 4.2.A – Augmented Inspections
 - ✓ TS Table 4.2
 - Item 2.1.1 both examination frequency and frequency
 - Item 2.1.2 both examination requirements and frequency
 - Item 2.1.3 both examination requirements and frequency
 - ✓ TS 4.17 Specification – Snubbers

Section XI continues to be referenced in TS 4.2 as it relates to the examination methods and frequency of the augmented inspections.

- Delete Section 4.3, ASME Code Class 1, 2, and 3 System Pressure Tests and the associated Bases. Consistent with the removal of the ISI requirements from TS, the pressure testing requirements are being removed from Technical Specifications.
- Establish a Bases Control Program

6.4.J Technical Specifications (TS) Bases Control Program

This program provides a means for processing changes to the Bases of these Technical Specifications.

1. Changes to the Bases of the TS shall be made under appropriate administrative controls and reviews.
 2. Licensees may make changes to Bases without prior NRC approval provided the changes do not require either of the following:
 - a) a change in the TS incorporated in the license; or
 - b) a change to the UFSAR or Bases that requires NRC approval pursuant to 10 CFR 50.59.
 3. The Bases Control Program shall contain provisions to ensure that the Bases are maintained consistent with the UFSAR.
 4. Proposed changes that meet the criteria of Specification 6.4.J.2 above shall be reviewed and approved by the NRC prior to implementation. Changes to the Bases implemented without prior NRC approval shall be provided to the NRC on a frequency consistent with 10 CFR 50.71(e).
- The title of Section 6.4 is being changed from “Unit Operating Procedures” to “Unit Operating Procedures and Programs.”
 - The following Bases Sections are being revised for consistency with the changes. The Bases changes are provided for information only.
 - ✓ Delete the Bases for TS 4.0.5 (pages 4.0-7&8)
 - ✓ Bases 4.2 Item 2.1 and 2.2 (page 4.2-2)
 - ✓ Bases 4.8 (page 4.8-3)
 - ✓ Bases 4.11 (page 4.11-4)
 - Identified typos on the TS pages affected by this change are being corrected.

SAFETY SIGNIFICANCE

The proposed changes are administrative in nature, in that the changes only relocate and update the IST program, do not eliminate any tests (IST) or inspections (ISI), and establish a Technical Specification Bases Control Program. The changes are consistent with Improved Technical Specifications. These proposed changes will eliminate the ASME Code inconsistency between the IST program and the TS as required by 10 CFR 50.55a(f)(5)(ii). These administrative type changes to the TS have no impact on public health and safety.

NO SIGNIFICANT HAZARDS CONSIDERATION

Virginia Electric and Power Company has reviewed the requirements of 10 CFR 50.92 as they relate to the proposed Technical Specifications change to include an IST and Technical Specifications Bases Control Program for the Surry Units 1 and 2. We have determined that a significant hazards consideration is not involved as discussed below:

The proposed changes are administrative in nature. In the Federal Register, Vol. 51, No. 44, dated March 6, 1986, "Rules and Regulations," the NRC provided guidance for the determination of significant hazards considerations. Under item (e) regarding examples of Technical Specifications amendments that are considered not likely to involve significant hazards consideration, the following example was listed:

- (i) A purely administrative change to technical specifications: for example, a change to achieve consistency throughout the technical specifications, correction of an error, or a change in nomenclature.

Technical issues concerning the Code were resolved previously through the NRC endorsement process which updates 10 CFR 50.55a(b)(2). 10 CFR 50.55a(f)(5)(ii), states that if a revised inservice testing 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. The proposed changes to the Technical Specifications (TS) for Surry Power Station Units 1 and 2 will: 1) delete TS 4.0.5 ISI and IST requirements; 2) relocate the IST surveillance requirements to the administrative section of TS as a program and revise the associated TS to reference the IST program instead of TS 4.0.5; 3) delete the inservice inspection surveillance requirements and individual TS references to the ISI program since these requirements are included in 10 CFR 50.55a; and 4) add a TS Bases Control Program to the Administrative Controls section of the TS. The changes associated with IST program are required pursuant to 10 CFR 50.55a(f)(5)(ii) to eliminate an inconsistency between the TS and the approved ASME Code. Furthermore, the ISI and IST changes are consistent with NUREG-1431, Standard Technical Specifications for Westinghouse Plants.

Criterion 1 - Operation of Surry Units 1 and 2 in accordance with the proposed Technical Specifications change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed change is administrative in nature, and station operations are not being affected. The ASME Code requirements are established, reviewed and approved by ASME, the industry and ultimately endorsed by the NRC for inclusion into 10 CFR 50.55a. Updates to the ASME Code reflect advances in technology and consider information obtained from plant operating experience to provide enhanced inspection and testing. Thus, the proposed change only modifies TS to appropriately reference the recently NRC approved Inservice Testing Program for the fourth interval at Surry Power Station. Consequently, the probability or consequences of an accident previously evaluated are not increased.

Criterion 2 - The proposed Technical Specifications change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

As noted above, the proposed change is administrative in nature, and no new accident precursors are being introduced. Since the inservice testing will continue to be performed in accordance with an NRC approved program, adequate assurance is provided to ensure the safety-related pumps and valves would operate as required. No new testing is required that could create a new or different type of accident. Consequently, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

Criterion 3 - The proposed Technical Specifications change does not involve a significant reduction in a margin of safety.

Performing inservice testing of pumps and valves to the NRC approved program for the fourth interval at Surry Power Station provides adequate assurance that the safety-related pumps and valves will continue to perform their intended safety function. This is an administrative change in nature and as such does not involve a significant reduction in the margin of safety.

ENVIRONMENTAL ASSESSMENT

This amendment request meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) as follows:

- (i) The amendment involves no significant hazards consideration.

As described above, the proposed change involves no significant hazards consideration.

- (ii) There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite.

The proposed change does not involve the installation of any new equipment, or the modification of any equipment that may affect the types or amounts of effluents that may be released offsite. This change only establishes programs to address Inservice Testing activities and the Bases of Surry's Technical Specification. Therefore, there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite.

- (iii) There is no significant increase in individual or cumulative occupation radiation exposure.

The proposed change does not involve plant physical changes, or introduce any new mode of plant operation. This change only establishes programs to address Inservice Testing activities and the Bases of Surry's Technical Specification. Therefore, there is no significant increase in individual or cumulative occupational radiation exposure.

Based on the above, Dominion concludes that the proposed changes meet the criteria specified in 10 CFR 51.22 for a categorical exclusion from the requirements of 10 CFR 51.22 relative to requiring a specific environmental assessment by the Commission.

Attachment 2

Proposed Technical Specification Changes For Inservice Testing and Bases Control Program

Mark-Up of Proposed Changes

**Surry Power Station Units 1 and 2
Virginia Electric and Power Company
(Dominion)**

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3.16	EMERGENCY POWER SYSTEM	TS 3.16-1
3.17	LOOP STOP VALVE OPERATION	TS 3.17-1
3.18	MOVABLE INCORE INSTRUMENTATION	TS 3.18-1
3.19	MAIN CONTROL ROOM BOTTLED AIR SYSTEM	TS 3.19-1
3.20	SHOCK SUPPRESSORS (SNUBBERS)	TS 3.20-1
3.21	DELETED	
3.22	AUXILIARY VENTILATION EXHAUST FILTER TRAINS	TS 3.22-1
3.23	CONTROL AND RELAY ROOM VENTILATION SUPPLY FILTER TRAINS	TS 3.23-1
4.0	<u>SURVEILLANCE REQUIREMENTS</u>	TS 4.0-1
4.1	OPERATIONAL SAFETY REVIEW	TS 4.1-1
4.2	AUGMENTED INSPECTIONS	TS 4.2-1
4.3	ASME CODE CLASS 1, 2, AND 3 SYSTEM PRESSURE TESTS	TS 4.3-1
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4.10	REACTIVITY ANOMALIES	TS 4.10-1
4.11	SAFETY INJECTION SYSTEM TESTS	TS 4.11-1
4.12	VENTILATION FILTER TESTS	TS 4.12-1
4.13	DELETED	
4.14	DELETED	

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4.16	LEAKAGE TESTING OF MISCELLANEOUS RADIOACTIVE MATERIALS SOURCES	TS 4.16-1
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4.18	DELETED	
4.19	STEAM GENERATOR INSERVICE INSPECTION	TS 4.19-1
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5.0	<u>DESIGN FEATURES</u>	TS 5.1-1
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6.3	ACTION TO BE TAKEN IF A SAFETY LIMIT IS EXCEEDED	TS 6.3-1
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6.5	STATION OPERATING RECORDS	TS 6.5-1
6.6	STATION REPORTING REQUIREMENTS	TS 6.6-1
6.7	ENVIRONMENTAL QUALIFICATIONS	TS 6.7-1
6.8	PROCESS CONTROL PROGRAM AND OFFSITE DOSE CALCULATION MANUAL	TS 6.8-1

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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 testing of ASME Code Class 1, 2, and 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(f), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50, Section 50.55a(f)(6)(i). Inservice inspection of ASME Code Class 1, 2, and 3 components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable 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 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:

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delete
AM) INSERT AS PROGRAM
IN SECTION 6.4.

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

Monthly

At least once per 31 days

Quarterly or Every 3 months

At least once per 92 days

COLD SHUTDOWN

At least once per CSD

REFUELING SHUTDOWN

At least once per RSD

c. The provisions of Specification 4.0.2 are applicable to the above required frequencies for pump and valve testing only. Extensions for inservice inspection of components will be to the requirements of Section XI of the ASME Boiler and Pressure Vessel Code.

d. Performance of the above inservice inspection and testing activities shall be in addition to other specified Surveillance Requirements.

e. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any Technical Specification.

delete

AND INSERT
AS PROGRAM IN
SECTION 6.4

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Under the provisions of this specification, the applicable surveillance requirements must be performed within the specified surveillance interval to ensure that the Limiting Conditions for Operation are met during initial plant startup or following a plant outage.

Exceptions to Specification 4.0.4 allow performance of surveillance requirements associated with a Limiting Condition for Operation after entry into the applicable operational condition.

When a shutdown is required to comply with Action Statement requirements, the provisions of Specification 4.0.4 do not apply because this would delay placing the facility in a lower condition of operation.

4.0.5 This specification ensures that inservice inspection, repairs, and replacements 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 applicable Addenda as required by 10 CFR 50, Section 50.55a. Specific relief from portions of the above requirements has been provided in writing by the Commission and is not a part of these Technical Specifications

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.

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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 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.

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4.1 OPERATIONAL SAFETY REVIEW

Applicability

Applies to items directly related to safety limits and limiting conditions for operation.

Objective

To specify the minimum frequency and type of surveillance to be applied to unit equipment and conditions.

Specification

A. Calibration, testing, and checking of instrumentation channels and interlocks shall be performed as detailed in Tables 4.1-1, 4.1-A, and 4.1-2.

B. Equipment tests shall be performed as detailed in Table 4.1-2 A and as detailed below.

- The Inservice Testing Program*
1. In addition to the requirements of ~~4.0.5~~, each Pressurizer PORV and block valve shall be demonstrated OPERABLE by:
 - a. Performing a complete cycle of each PORV with the reactor coolant average temperature $>350^{\circ}\text{F}$ once per 18 months.
 - b. Performing a complete cycle of the solenoid air control valve and check valves on the air accumulators in the PORV control system once per 18 months.
 - c. Operating each block valve through one complete cycle of travel at least once per 92 days. This surveillance is not required if the block valve is closed in accordance with 3.1.6.a, b, or c.
 - d. Verifying that the pressure in the PORV backup air supply is greater than the surveillance limit at least once per 92 days.
 - e. Performing functional testing and calibration of the PORV backup air supply instrumentation and alarm setpoints at least once per 18 months.

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TABLE 4.1-2A
MINIMUM FREQUENCY FOR EQUIPMENT TESTS

<u>DESCRIPTION</u>	<u>TEST</u>	<u>FREQUENCY</u>	<u>FSAR SECTION REFERENCE</u>
1. Control Rod Assemblies	Rod drop times of all full length rods at hot conditions	Prior to reactor criticality: a. For all rods following each removal of the reactor vessel head b. For specially affected individual rods following any maintenance on or modification to the control rod drive system which could affect the drop time of those specific rods, and c. Once per 18 months	7
2. Control Rod Assemblies	Partial movement of all rods	Quarterly	7
3. Refueling Water Chemical Addition Tank	Functional	Once per 18 months	6
4. Pressurizer Safety Valves	Setpoint	Per TS 4.0.5	4
5. Main Steam Safety Valves	Setpoint	Per TS 4.0.5	10
6. Containment Isolation Trip	* Functional	Once per 18 months	5
7. Refueling System Interlocks	* Functional	Prior to refueling	9.12
8. Service Water System	* Functional	Once per 18 months	9.9
9. Deleted			
10. Primary System Leakage	* Evaluate	Daily	4
11. Diesel Fuel Supply	* Fuel Inventory	5 days/week	8.5
12. Deleted			
13. Main Steam Line Trip Valves	Functional (Full Closure)	Before each startup (TS 4.7) The provisions of Specification 4.0.4. are not applicable	10

the Inservice Testing Program

Amendment Nos. 238 and 237

2

TS 4.1-9b
~~12-16-03~~

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4.2 AUGMENTED INSPECTIONS

Applicability

Applies to inservice inspections which augment those required by ASME Section XI.

Objective

To provide the additional assurance necessary for the continued integrity of important components involved in safety and plant operation.

Specifications

- A. Inspections shall be performed as specified in TS. Table 4.2-1. Nondestructive examination techniques and acceptance criteria shall be in compliance with the requirements of ~~TS 4.0.5:~~ **ASME SECTION XI.**
- B. The normal inspection interval is 10 years.
- C. Detailed records of each inspection shall be maintained to allow a continuing evaluation and comparison with future inspections.

Bases







The inspection program for ASME Section XI of the ASME Boiler and Pressure Vessel Code limits its inspection to ASME Code Class 1, 2, and 3 components and supports. Certain components, under Miscellaneous Inspections in this section, were added because of no corresponding code requirement. This added requirement provides the inspection necessary to insure the continued integrity of these components.

Item 1.4

The low pressure turbine rotor blades are normally inspected concurrent with the disk and hub inspections. The disk and hub inspection frequency is based on existing crack size, crack growth rate, and system operating conditions. ASME Section XI does not provide specific examination requirements or acceptance criteria for turbine rotor inspections. Procedures and acceptance criteria for turbine rotor inspections are consistent with general industry practices.

TABLE 4.2-1(continued)

SECTION B. SENSITIZED STAINLESS STEEL

<u>Item No.</u>	<u>Required Examination Area</u>	<u>Required Examination Methods</u>	<u>10-Year Interval Inspection</u>	<u>Remarks</u>
2.1.1	Class 1 circumferential, longitudinal, branch pipe connection, and socket welds	As required by T.S. 4.0.5 	The welds examined by volumetric or surface techniques shall be conducted at three times the frequency required by T.S. 4.0.5 	A minimum of 5% of the welds shall be examined once per 18 months. At least 75% of the total population of welds shall be examined each interval. The same welds may be selected in subsequent intervals for examination. See Note 1.
2.1.2	Class 2 circumferential, longitudinal, branch pipe connection, and socket welds	As required by T.S. 4.0.5 	The welds examined by volumetric or surface techniques shall be conducted at three times the frequency required by T.S. 4.0.5 	A minimum of 2.5% of the welds shall be examined once per 18 months. At least 22.5% of the total population of welds shall be examined each interval. The same welds may be selected in subsequent intervals for examination. See Note 1.
2.1.3	Class 1 and Class 2 sensitized stainless steel pieces	Visual (VT-2) as required by T.S. 4.0.5 	As required by T.S. 4.0.5 	In addition to the Code required examinations the affected piping shall be visually (VT-2) examined during the flushing requirements of T.S. Tables 4.1-3A and 4.1-3B.

ASME SECTION XI

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Amendment Nos. 243 and 215

TS 4.2-4
06-11-98

Sensitized stainless steel augmented inspections were added to assure piping integrity of this classification.

Item ⁶2.1.1 - 2.1.3

The examinations required by ~~this item~~ ^{these} ⁶ utilize the periodically updated ASME Section XI Boiler and Pressure Vessel Code ~~referenced in Technical Specification 4.0.5~~ ^{for} ⁶ in this augmented examination. ⁶ The surface and volumetric examinations required by ~~this item~~ ⁵

~~2.1.1 and 2.1.2~~

⁶ will be conducted at three times the frequency required by the Code in an interval. In addition to the Code required pressure testing, visual examinations will be conducted, while the piping is pressurized by the procedures defined in Tables 4.1-3A & B of Technical Specification 4.1, concerning flushing of sensitized stainless steel piping. Weld selection criteria are modified from the Code for Class 1 welds, since stress level information as correlated to weld location is unavailable for Surry.

Item 2.2.1

The sensitized stainless steel located in the containment and recirculation spray rings in the overhead of containment are classified ASME Class 2 components. These components are currently exempted by ASME Section XI from surface and volumetric examination requirements. As such, an augmented program will remain in place requiring visual (VT-1) examination of these components for evidence of cracking. Additionally, sections of the piping will be examined by liquid penetrant inspection when the piping is visually inspected.

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4.3 ASME CODE CLASS 1, 2, AND 3 SYSTEM PRESSURE TESTS

Applicability

Applies to requirement for ASME Code Class 1, 2, and 3 System Pressure Tests. In this context, closed is defined as the state of system integrity which permits pressurization and subsequent normal operation after the system has been opened.

Objective

To specify requirements for ASME Code Class 1, 2, and 3 System Pressure Tests following normal operation, modification, or repair. The pressure-temperature limits for Reactor Coolant System tests will be in accordance with Figure 3.1-1.

Specification

- A. Inservice inspection, which includes system pressure testing, of ASME Code Class 1, 2, and 3 components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g), except where specific written relief has been granted by the NRC pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).

delete

BASIS

System pressure testing is performed in order to insure integrity of the system. For normal opening the integrity of the system, in terms of strength, is unchanged. The testing is based on 10 CFR 50.55a and performed pursuant to Section XI of the ASME Code for inservice inspection of Class 1, 2, and 3 components.

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Page

~~(Pages TS 4.3-3 and TS 4.3-4 have been deleted)~~

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4.5 SPRAY SYSTEMS TESTS

Applicability

Applies to the testing of the Spray Systems.

Objective

To verify that the Spray Systems will respond promptly and perform their design function, if required.

Specification


A. Each containment spray subsystem shall be demonstrated OPERABLE:

1. By verifying, that on recirculation flow, each containment spray pump performs satisfactorily when tested in accordance with ~~Specification 4.0.5~~ *the Inservice Testing Program*
2. By verifying that each motor-operated valve in the containment spray flow path performs satisfactorily when tested in accordance with ~~Specification 4.0.5~~ *the Inservice Testing Program*
3. By verifying each spray nozzle is unobstructed following maintenance which could cause nozzle blockage.
4. Coincident with the containment spray pump test described in Specification 4.5.A.1, by verifying that no particulate material clogs the test spray nozzles in the refueling water storage tank.

B. Each recirculation spray subsystem shall be demonstrated OPERABLE:

1. By verifying each recirculation spray pump performs satisfactorily when tested in accordance with ~~Specification 4.0.5~~ *the Inservice Testing Program*

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2. By verifying that each motor-operated valve in the recirculation spray flow paths performs satisfactorily when tested in accordance with ~~Specification 4.0.5.~~ *the In-service Testing Program*
 3. By verifying each spray nozzle is unobstructed following maintenance which could cause nozzle blockage. 
- C. Each weight-loaded check valve in the containment spray and outside containment recirculation spray subsystems shall be demonstrated OPERABLE once per 18 months by cycling the valve one complete cycle of full travel and verifying that each valve opens when the discharge line of the pump is pressurized with air and seats when a vacuum is applied.
- D. A visual inspection of the containment sump and the inside containment recirculation spray pump wells and the engineered safeguards suction inlets shall be performed once per 18 months and/or after major maintenance activities in the containment. The inspection should verify that the containment sump and pump wells are free of debris that could degrade system operation and that the sump components (i.e., trash racks, screens) are properly installed and show no sign of structural distress or excessive corrosion.

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4.8 AUXILIARY FEEDWATER SYSTEM

Applicability

Applies to the periodic testing requirements of the Auxiliary Feedwater System.

Objective

To verify the operability of the auxiliary feedwater pumps.

Specification

A. Tests and Frequencies

1. At least once per 31 days:
 - a. Verify that the Auxiliary Feedwater System manual, power operated, and automatic valves in each flow path are in the correct position. This verification includes valves that are not locked, sealed, or otherwise secured in position, valves in the the cross-connect from the opposite unit and valves in the steam supply paths to the turbine driven auxiliary feedwater pump.
2. At least once per 92 days:
 - a. Verify that each motor-operated valve in the auxiliary feedwater flow paths, including the cross-connect from the opposite unit, performs satisfactorily when tested in accordance with ~~Specifications 4.0.5~~.
3. At least once per 92 days on a STAGGERED TEST BASIS:
 - a. Verify that the auxiliary feedwater pumps perform satisfactorily when tested in accordance with ~~Specification 4.0.5~~. The provisions of Specification 4.0.4 are not applicable for the turbine driven pump.

the Inservice Testing Program

- 4a. Within 72 hours prior to Reactor Coolant System temperature and pressure exceeding 350°F and 450 psig, respectively, the motor driven auxiliary feedwater pumps shall be flow tested from the 110,000 gallon above ground Emergency Condensate Storage Tank to the steam generators.
- 4b. Within 72 hours after achieving reactor criticality, the steam turbine driven auxiliary feedwater pump shall be flow tested from the 110,000 gallon above ground Emergency Condensate Storage Tank to the steam generators. The provisions of Specification 4.0.4 are not applicable.
5. During periods of reactor shutdown with the opposite unit's Reactor Coolant System temperature and pressure greater than 350°F and 450 psig, respectively:
 - a. Continue to verify that the motor driven auxiliary feedwater pumps perform satisfactorily when tested at the frequency defined in Specification 4.8.A.3.
 - b. Verify that each motor-operated valve in the auxiliary feedwater cross-connect flow path for the opposite unit performs satisfactorily when tested in accordance with ~~Specifications 4.0.5~~

the Inservice Testing Program

B. Acceptance Criteria

The pump and valve tests, except the system flow test, shall be considered satisfactory if they meet the ~~ASME Section XI~~ Inservice Testing Program acceptance criteria.

The system flow tests during unit startup from COLD SHUTDOWN or REFUELING SHUTDOWN shall be considered satisfactory if the control board indication demonstrates that flow paths exist to each steam generator.

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Basis

The correct alignment for manual, power operated, and automatic valves in the Auxiliary Feedwater System steam and water flow paths, including the cross-connect flow path, will provide assurance that the proper flow paths exist for system operation. This position check does not include: 1) valves that are locked, sealed or otherwise secured in position since they are verified to be in their correct position prior to locking, sealing or otherwise securing; 2) vent, drain or relief valves on those flow paths; and, 3) those valves that cannot be inadvertently misaligned such as check valves. This surveillance does not require any testing or valve manipulation. It involves verification that those valves capable of being mispositioned are in the correct position.

The auxiliary feedwater pump will be tested periodically in accordance with ~~ASME Section XI~~ to demonstrate operability. The pumps are flow tested on recirculation to the 110,000 gallon Emergency Condensate Storage Tank. Valves in the flow path to the steam generators and cross-connect flow path are tested periodically in accordance with ~~ASME Section XI~~.

The Inservice Testing Program

The auxiliary feedwater pumps are capable of supplying feedwater to the opposite units steam generators. For a main steam line break or fire event in the Main Steam Valve House, one of the opposite units auxiliary feedwater pumps is required to supply feedwater to mitigate the consequences of those accidents. Therefore, when considering a single failure, both motor driven auxiliary feedwater pumps are required to be OPERABLE* during shutdown to support the opposite unit if the Reactor Coolant System temperature or pressure of the opposite unit is greater than 350°F and 450 psig, respectively. Thus, to establish operability* the motor driven auxiliary feedwater pumps will continue to be tested quarterly on the same STAGGERED TEST BASIS when the unit is shutdown to support the opposite unit. The turbine driven pump is not required to be OPERABLE when the unit is shutdown and therefore, is not tested during periods of shutdown.

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* excluding automatic initiation instrumentation

2. At least once per 31 days and within 6 hours after each solution volume increase of greater than or equal to 1% of tank volume by verifying the boron concentration of the accumulator solution.

- a. This surveillance is not required when the volume increase makeup source is the RWST.

C. Each Safety Injection Subsystem shall be demonstrated OPERABLE:

1. By verifying, that on recirculation flow, each low head safety injection pump performs satisfactorily when tested in accordance with ~~Specification 4.0.5~~.
2. By verifying that each charging pump performs satisfactorily when tested in accordance with ~~Specification 4.0.5~~.
3. By verifying that each motor-operated valve in the safety injection flow path performs satisfactorily when tested in accordance with ~~Specification 4.0.5~~.
4. Prior to POWER OPERATION by:

- a. Verifying that the following motor operated valves are blocked open by de-energizing AC power to the valves motor operator and tagging the breaker in the off position:

Unit 1

Unit 2

MOV-1890C

MOV-2890C

- b. Verifying that the following motor operated valves are blocked closed by de-energizing AC power to the valves motor operator and the breaker is locked, sealed or otherwise secured in the off position:

Unit 1

Unit 2

MOV-1869A

MOV-2869A

MOV-1869B

MOV-2869B

MOV-1890A

MOV-2890A

MOV-1890B

MOV-2890B

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The system tests demonstrate proper automatic operation of the Safety Injection System. A test signal is applied to initiate automatic operation action and verification is made that the components receive the safety injection signal in the proper sequence. The test may be performed with the pumps blocked from starting. The test demonstrates the operation of the valves, pump circuit breakers, and automatic circuitry.

During reactor operation, the instrumentation which is depended on to initiate safety injection is checked periodically, and the initiating circuits are tested in accordance with Specification 4.1. In addition, the active components (pumps and valves) are to be periodically tested to check the operation of the starting circuits and to verify that the pumps are in satisfactory running order. The test interval is determined in accordance with ~~ASME Section XI~~. The accumulators are a passive safeguard.

the Inservice Testing Program

References

UFSAR Section 6.2, Safety Injection System

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4.17 SHOCK SUPPRESSORS (SNUBBERS)

Applicability

Applies to all hydraulic and mechanical shock suppressors (snubbers) which are required to protect the Reactor Coolant System and other safety-related systems. Snubbers excluded from this inspection are those installed on non-safety-related systems and then only if their failure or failure of the system on which they are installed would have no adverse effect on any safety-related system.

Objective

To specify the minimum frequency and type of surveillance to be applied to the hydraulic and mechanical snubbers required to protect the Reactor Coolant System and other safety-related systems.

Specification

Each snubber shall be demonstrated OPERABLE by performing the following augmented inservice inspection program and the requirements of ~~Specification 4.0.5~~. As used in this specification, "type of snubber" shall mean snubbers of the same design and manufacturer, irrespective of capacity.

of the Inspection Program

A. Visual Inspections

1. Snubbers are categorized as inaccessible or accessible during reactor operation. Each of these categories (inaccessible and accessible) may be inspected independently according to the schedule determined by Table 4.17-1. The visual inspection interval of each category of snubber shall be determined based upon the criteria provided in Table 4.17-1.