

VIRGINIA ELECTRIC AND POWER COMPANY  
RICHMOND, VIRGINIA 23261

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10 CFR 50.90

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, DC 20555-0001

Serial No.: 14-158  
SPS/LIC-CGL: R1  
Docket Nos.: 50-280/281  
License Nos.: DPR-32/37

**VIRGINIA ELECTRIC AND POWER COMPANY**  
**SURRY POWER STATION UNITS 1 AND 2**  
**PROPOSED LICENSE AMENDMENT REQUEST**  
**RELOCATION OF AUGMENTED INSPECTION REQUIREMENTS**  
**FROM TS 4.2 AND TS 4.15 TO TECHNICAL REQUIREMENTS MANUAL**

Pursuant to 10CFR50.90, Virginia Electric and Power Company (Dominion) is submitting a license amendment request to revise the Surry Units 1 and 2 Technical Specifications (TS). Specifically, TS 4.2, "Augmented Inspections," and TS 4.15, "Augmented Inservice Inspection Program for High Energy Lines Outside of Containment," will be relocated to the Surry Technical Requirements Manual (TRM). In addition, TS 6.4.U, "Augmented Inspections and Examinations," will be added to the Administrative Controls Section 6.4, "Unit Operating Procedures and Programs." The proposed relocation of the TS 4.2 and TS 4.15 requirements to the TRM is appropriate since these requirements do not satisfy the categories and criteria of 10CFR50.36(c) for inclusion in the TS. Along with the relocation of the TS 4.2 and TS 4.15 requirements to the TRM, the Bases for TS 4.2 and TS 4.15 are also being relocated to the TRM.

Attachment 1 provides a discussion of the proposed change. The marked-up and proposed pages for the TS and TS Bases are provided in Attachments 2 and 3, respectively. The TS Bases changes are provided for NRC information only.

We have evaluated the proposed amendment and have determined that it does not involve a significant hazards consideration as defined in 10CFR50.92. The basis for this determination is included in Attachment 1. We have also determined that operation with the proposed change will not result in any significant increase in the amount of effluents that may be released offsite or any significant increase in individual or cumulative occupational radiation exposure. Therefore, the proposed amendment is eligible for categorical exclusion from an environmental assessment as set forth in 10CFR51.22(c)(9). Pursuant to 10CFR51.22(b), no environmental impact statement or environmental assessment is needed in connection with the approval of the proposed change. The proposed TS change has been reviewed and approved by the Facility Safety Review Committee.

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**Attachment 1**

**DISCUSSION OF CHANGE**

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

## **DISCUSSION OF CHANGE**

### **1.0 INTRODUCTION**

In accordance with the provisions of 10CFR50.90, Virginia Electric and Power Company (Dominion) is submitting a license amendment request to revise the Surry Units 1 and 2 Technical Specifications (TS). Specifically, TS 4.2, "Augmented Inspections," and TS 4.15, "Augmented Inservice Inspection Program for High Energy Lines Outside of Containment," will be relocated to the Surry Technical Requirements Manual (TRM). In addition, TS 6.4.U, "Augmented Inspections and Examinations," will be added to the Administrative Controls Section 6.4, "Unit Operating Procedures and Programs." The proposed relocation of the TS 4.2 and TS 4.15 requirements to the TRM is appropriate since these requirements do not satisfy the categories and criteria of 10CFR50.36(c) for inclusion in the TS. Along with the relocation of the TS 4.2 and TS 4.15 requirements to the TRM, the Bases for TS 4.2 and TS 4.15 are also being relocated to the TRM. The TS Bases changes are provided to the NRC for information.

### **2.0 PROPOSED CHANGE**

The proposed TS revisions are summarized below:

- TS 4.2 and the TS 4.2 Bases will be relocated in their entirety to the Surry TRM.
- TS 4.15 and the TS 4.15 Basis will be relocated in their entirety to the Surry TRM.
- TS 6.4.U, "Augmented Inspections and Examinations," will be added to the Administrative Controls Section 6.4, "Unit Operating Procedures and Programs," to provide a description of the augmented inspections and examinations being relocated to the Surry TRM.

Marked-up TS and TS Bases pages and typed proposed TS pages are provided in Attachments 2 and 3, respectively.

### **3.0 BACKGROUND**

#### **TS 4.2 – Augmented Inspections**

TS 4.2 provides requirements for inservice inspections which augment those required by ASME Section XI. These requirements provide additional assurance of continued integrity of important components. The current TS 4.2 augmented inspections were incorporated into the Surry TS by Amendments 128/128, issued by an NRC letter dated May 24, 1989. Amendments 128/128 removed obsolete inservice inspection/testing

requirements and replaced them with more up-to-date NRC-approved requirements specified in 10CFR50.55a(g). The augmented inspections currently in TS 4.2 address the low head safety injection piping in the valve pit, the reactor coolant pump flywheel, the low pressure turbine blades, and sensitized stainless steel. Sensitized stainless steel was discussed in the Surry Safety Evaluation Report and sensitized stainless steel inspection requirements were included in the original Surry TS in response to an Atomic Safety and Licensing Board (ASLB) hearing decision dated April 26, 1972. The addition of TS 6.4.U, "Augmented Inspections," which provides a description of the augmented inspections and examinations being relocated to the TRM, including sensitized stainless steel, continues to meet the conclusions stated in the ASLB decision.

#### TS 4.15 – Augmented Inservice Inspection Program for High Energy Lines Outside of Containment

TS 4.15 provides an augmented inservice inspection program for high energy lines outside of containment. These requirements apply to welds in piping systems or portions of piping systems located outside of containment where protection from the consequences of postulated ruptures is not provided by a system of pipe whip restraints, jet impingement barriers, protective enclosures and/or other measures designed specifically to cope with such ruptures. These augmented inservice inspections provide assurance of the continued integrity of the piping systems over their service life. These requirements were incorporated into the Surry TS by Change No. 13, issued by an NRC letter dated September 21, 1973. These requirements resulted from the NRC review of the Surry analysis of postulated high energy line breaks outside of containment and apply to welds in the main steam and main feedwater lines in the main steam valve house of both units.

## **4.0 REGULATORY/TECHNICAL ANALYSIS**

### **4.1 Comparison to 10CFR50.36 Categories and Criteria for Inclusion in TS**

The relocation of the TS 4.2 and TS 4.15 augmented inspection requirements to the TRM is appropriate because the requirements do not satisfy the 10CFR50.36 categories and criteria for inclusion of information in TS.

10CFR50.36(c) states that technical specifications will include items in the following categories:

- (1) *Safety limits, limiting safety system settings, and limiting control settings.*

The TS 4.2 augmented inspections and the TS 4.15 augmented inservice inspection program for high energy lines outside of containment are not safety limits or limiting safety system settings related to protection of the nuclear reactor.

Note that limiting control settings apply to fuel reprocessing plants, not to nuclear reactors.

(2) *Limiting conditions for operation.*

- (A) *Criterion 1.* Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.
- (B) *Criterion 2.* A process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
- (C) *Criterion 3.* A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
- (D) *Criterion 4.* A structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety.

The TS 4.2 augmented inspections and the TS 4.15 augmented inservice inspection program for high energy lines outside of containment are not limiting conditions for operation for installed instrumentation, a process variable/design feature/operating restriction, a primary success path structure, system, or component (SSC), or an SSC shown to be significant to public health and safety.

(3) *Surveillance requirements.*

The TS 4.2 augmented inspections and the TS 4.15 augmented inservice inspection program for high energy lines outside of containment are not surveillance requirements (relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met) that are required to be included in the TS. The augmented inspections are performed in addition to required ASME Code Section XI inspections/examinations and will continue to be performed as required by the TRM.

(4) *Design features.*

The TS 4.2 augmented inspections and the TS 4.15 augmented inservice inspection program for high energy lines outside of containment are not facility design features, such as materials of construction and geometric arrangements, that could have a significant effect on safety.

(5) *Administrative controls.*

The TS 4.2 augmented inspections and the TS 4.15 augmented inservice inspection program for high energy lines outside of containment are not administrative controls relating to organization and management, procedures, recordkeeping, review and audit, and reporting necessary to assure safe operation.

(6) *Decommissioning.*

(7) *Initial notification.*

(8) *Written reports.*

The TS 4.2 augmented inspections and the TS 4.15 augmented inservice inspection program for high energy lines outside of containment are not related to nuclear power plant decommissioning, initial notification reports, or written reports in accordance with 10CFR50.73 or Special Reports.

As discussed above, the TS 4.2 augmented inspections and the TS 4.15 augmented inservice inspection program for high energy lines outside of containment do not satisfy the 10CFR50.36(c) categories and criteria for inclusion of information in TS. Thus, relocation of the TS 4.2 augmented inspections and the TS 4.15 augmented inservice inspection program for high energy lines outside of containment to the TRM is appropriate.

## **4.2 No Significant Hazards Consideration**

The NRC has provided standards for determining whether a significant hazards consideration exists as stated in 10CFR50.92(c). A proposed amendment to an operating license for a facility involves no significant hazards consideration if operation of the facility in accordance with a proposed amendment would not: 1) involve a significant increase in the probability or consequences of an accident previously evaluated, or 2) create the possibility of a new or different kind of accident from any accident previously evaluated, or 3) involve a significant reduction in a margin of safety. Dominion has evaluated if a significant hazards consideration (SHC) is involved with the proposed change. A discussion of these standards as they relate to this change request is provided below.

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

Response: No.

The proposed change relocates Technical Specification (TS) 4.2, "Augmented Inspections," TS 4.15, "Augmented Inservice Inspection Program for High Energy



Lines Outside of Containment," and the associated TS Bases to the Surry Technical Requirements Manual (TRM). In addition, TS 6.4.U, "Augmented Inspections and Examinations," will be added to the Surry TS. The proposed relocation of the TS 4.2 and TS 4.15 requirements to the TRM is appropriate since these requirements do not satisfy the categories and criteria of 10CFR50.36(c), which specifies what items qualify for inclusion in the TS.

Specifically, the TS 4.2 augmented inspections of the low head safety injection piping located in the valve pit, the reactor coolant pump flywheel, the low pressure turbine rotor blades, sensitized stainless steel, and TS 4.15 augmented inspections of the welds in the main steam and main feedwater lines in the main steam valve house of each unit will be relocated to the TRM. The augmented inspections, which are performed in addition to required ASME Code Section XI inspections/examinations, will continue to be performed as required by the TRM.

The plant systems and components to which the augmented inspections apply will not be operated in a different manner. The proposed relocation of the augmented inspections does not involve a physical change to the plant or a change in the manner in which the plant is operated or controlled.

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

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

Response: No.

The proposed change does not involve any physical alteration of plant equipment. As such, no new or different types of equipment will be installed, and the basic operation of installed plant systems and components, to which the augmented inspections apply, is unchanged.

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

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

Response: No.

The proposed change will not reduce a margin of safety because the relocation of the augmented inspections to the TRM has no impact on any safety analysis assumptions, as indicated by the fact that the requirements do not meet the

10CFR50.36(c) criteria for inclusion in the TS. In addition, the augmented inspections will be moved to the TRM without change and will continue to be performed as required by the TRM.

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

Based on the above, Dominion concludes that the proposed changes do not represent a significant hazards consideration under the standards set forth in 10CFR50.92(c).

## **5.0 ENVIRONMENTAL CONSIDERATION**

This license amendment request meets the eligibility criteria for categorical exclusion set forth in 10CFR51.22(c)(9) as follows:

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

As described above, the proposed license amendment request does not involve a 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 license amendment request relocates the TS 4.2 and TS 4.15 augmented inspection requirements to the TRM and does not affect the types or amounts of effluents that may be released offsite. 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 occupational radiation exposure.

The proposed license amendment request relocates the TS 4.2 and TS 4.15 augmented inspection requirements to the TRM and does not affect individual or cumulative occupational radiation exposure. Therefore, there is no significant increase in individual or cumulative occupational radiation exposure.

Based on the above assessment, Dominion concludes that the proposed change meets the criteria specified in 10CFR51.22 for a categorical exclusion from the requirements of 10CFR51.22 relative to requiring a specific environmental assessment or impact statement by the Commission.

## 6.0 CONCLUSION

The proposed license amendment request relocates TS 4.2, "Augmented Inspections," TS 4.15, "Augmented Inservice Inspection Program for High Energy Lines Outside of Containment," and the associated TS Bases to the Surry TRM and adds TS 6.4.U, "Augmented Inspections and Examinations," to the Administrative Controls Section 6.4, "Unit Operating Procedures and Programs." The proposed change is appropriate because the TS 4.2 and TS 4.15 requirements do not satisfy the 10CFR50.36(c) categories and criteria for inclusion of information in the TS. The augmented inspections, which are performed in addition to required ASME Code Section XI inspections/examinations, will continue to be performed as required by the TRM.

## 7.0 REFERENCES

- 7.1 Atomic Safety and Licensing Board, In the Matter of Virginia Electric and Power Company (Surry Power Station, Unit 1), Docket No. 50-280, *Initial Decision on Issue of Welds and Welding Practices*, dated April 26, 1972.
- 7.2 Letter from R. C. DeYoung of the US Atomic Energy Commission to Mr. E. B. Crutchfield of Virginia Electric and Power Company dated May 25, 1972, that issued Facility Operating License DPR-32 for Surry Power Station Unit 1 and associated Technical Specifications.
- 7.3 NRC letter dated September 21, 1973 – Issuance of Section 4.15, Change No. 13 - Augmented Inservice Inspection Program for High Energy Lines Outside of Containment
- 7.4 NRC letter dated May 24, 1989 – Subject: Surry Units 1 and 2 - Issuance of Amendments re: Inservice Inspection and Testing Requirements (TAC Nos. 56910 and 56911)

**Attachment 2**

**MARKED-UP TECHNICAL SPECIFICATIONS AND BASES PAGES**

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

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4.2

**AUGMENTED INSPECTIONS (RELOCATED TO TRM)**  
*Pages TS 4.2-2 through TS 4.2-5 have been deleted.*

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 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.

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

#### Items 2.1.1-2.1.3

The examinations required by these items utilize the periodically updated ASME Section XI Boiler and Pressure Vessel Code for the augmented examinations. The surface and volumetric examinations required by items 2.1.1 and 2.1.2 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.



TABLE 4.2-1

SECTION A. MISCELLANEOUS INSPECTIONS

<u>Item No.</u>	<u>Required Examination Area</u>	<u>Required Examination Methods</u>	<u>10-Year Interval Inspection</u>	<u>Remarks</u>
1.1	Deleted			
1.2	Low Head SIS piping located in valve pit	Visual	Non-applicable	This pipe shall be visually inspected once per 18 months.
1.3	Primary Pump Flywheel	See remarks	See remarks	Inspect once every 20 years by a qualified in-place UT examination over the volume from the inner bore of the flywheel to the circle of one-half the outer radius or a surface examination (MT and/or PT) of exposed surfaces defined by the volume of the disassembled flywheels. The provisions of Specification 4.02 are not applicable.
1.4	Low Pressure Turbine Rotor	Visual and Magnetic Particle or Dye Penetrant	See remarks	100% of blades every six operating years. Inspections are normally performed concurrent with LP turbine rotor disk and hub inspections.

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06-21-05

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 ASME Section XI	The welds examined by volumetric or surface techniques shall be conducted at three times the frequency required by ASME Section XI	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 ASME Section XI	The welds examined by volumetric or surface techniques shall be conducted at three times the frequency required by ASME Section XI	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 ASME Section XI	As required by ASME Section XI	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.

Amendment Nos. 243 and 242

TS 4-2-4  
07-15-05

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>
2.2.1	Containment and Recirculation Spray Piping	Visual (VT-1) and surface examination	(See remarks)	At least 25% of the examinations shall have been completed by the expiration of one-third of the inspection interval and at least 50% shall have been completed by the expiration of two-thirds of the inspection interval. The remaining required examinations shall be completed by the end of the inspection interval. Surface examinations will include 6 patches (each 9 inches square) evenly distributed around each spray ring.

- Note 1:
- a) The examinations shall be distributed among the systems prorated, to the degree practicable, on the number of sensitized stainless steel welds in each system (i.e., if a system contains 30% of the welds, then 30% of the required examinations shall be performed on that system).
  - b) Within a system terminal ends (e.g., branch connections, pipe to pump, pipe to valve) shall be selected. The remainder of the selection shall select structural discontinuities (pipe fittings) prorated to the degree practicable to the number of discontinuities in that system. Other selections may be necessary to meet the total weld selection criteria.
  - c) Within each system, examinations shall be distributed between line sizes prorated to the degree practicable.

4.15 AUGMENTED INSERVICE INSPECTION PROGRAM FOR HIGH ENERGY LINES  
OUTSIDE OF CONTAINMENT (RELOCATED TO TRM)

~~Applicability~~

~~Applies to welds in piping systems or portions of systems located outside of containment where protection from the consequences of postulated ruptures is not provided by a system of pipe whip restraints, jet impingement barriers, protective enclosures and/or other measures designed specifically to cope with such ruptures.~~

~~For Surry Units 1 and 2, this specification applies to welds in the main steam and main feedwater lines in the main steam valve house of each unit.~~

~~Objective~~

~~To provide assurance of the continued integrity of the piping systems over their service lifetime.~~

~~Specifications~~

~~A. For the 20 welds identified in TS Figure 4.15:~~

- ~~1. At the first refueling outage period a volumetric examination shall be performed with 100 percent inspection of welds in accordance with the requirement of ASME Section XI Code, Inservice Inspection of Nuclear Power Plant Components, to~~

Pages TS 4.15-2 through TS 4.15-4 and TS Figure 4.15  
have been deleted.

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establish system integrity and baseline data.

2. The inservice inspection at each weld shall be performed in accordance with the requirements of ASME Section XI Code, Inservice Inspection of Nuclear Power Plant Components, with the following schedule: (The inspection intervals identified below sequentially follow the baseline examination of TS 4.15.A.1 above):

First 10 Year  
Inspection Program Intervals

- |   |   |
|---|---|
| a. First 3-1/3 years (or nearest refueling outage)  | 100% volumetric inspection of all welds |
| b. Second 3-1/3 years (or nearest refueling outage) | 100% volumetric inspection of all welds |
| c. Third 3-1/3 years (or nearest refueling outage)  | 100% volumetric inspection of all welds |

Successive Inspection Intervals

Every 10 years thereafter (or nearest refueling outage)	Volumetric inspection of 1/3 of the welds at the expiration of each 1/3 of the inspection interval with a cumulative 100% coverage of all welds
---	---

Note - The welds selected during each inspection period shall be distributed among the total number to be examined to provide a representative sampling of the conditions of the welds.

3. Examinations that reveal unacceptable structural defects in a weld during an inspection under TS 4.15.A.2 shall be extended to require an additional inspection of another 1/3 of the welds. If further unacceptable defects are detected in the second sampling, the remainder of the welds shall be inspected.

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4. In the event repairs of any welds are required following any examination during successive inspection intervals, the inspection schedule for the repaired welds will revert back to the first 10 year inspection program.

B. For all welds other than those identified in TS Figure 4.15 :

1. Welds in the main steam lines including the safety valve headers and in the feedwater lines in the main steam valve house shall be examined in accordance with the requirements of subsection IWC of the ASME Section XI Code.

C. For all welds in the main steam valve house:

1. A visual inspection of the surface of the insulation at all weld locations shall be performed on a weekly basis for detection of leaks. Any detected leaks shall be investigated and evaluated. If the leakage is caused by a through-wall flaw, either the plant shall be shutdown, or the leaking piping isolated. Repairs shall be performed prior to return of this line to service.

2. Repairs, reexamination and piping pressure tests shall be conducted in accordance with the rules of ASME Section XI Code.

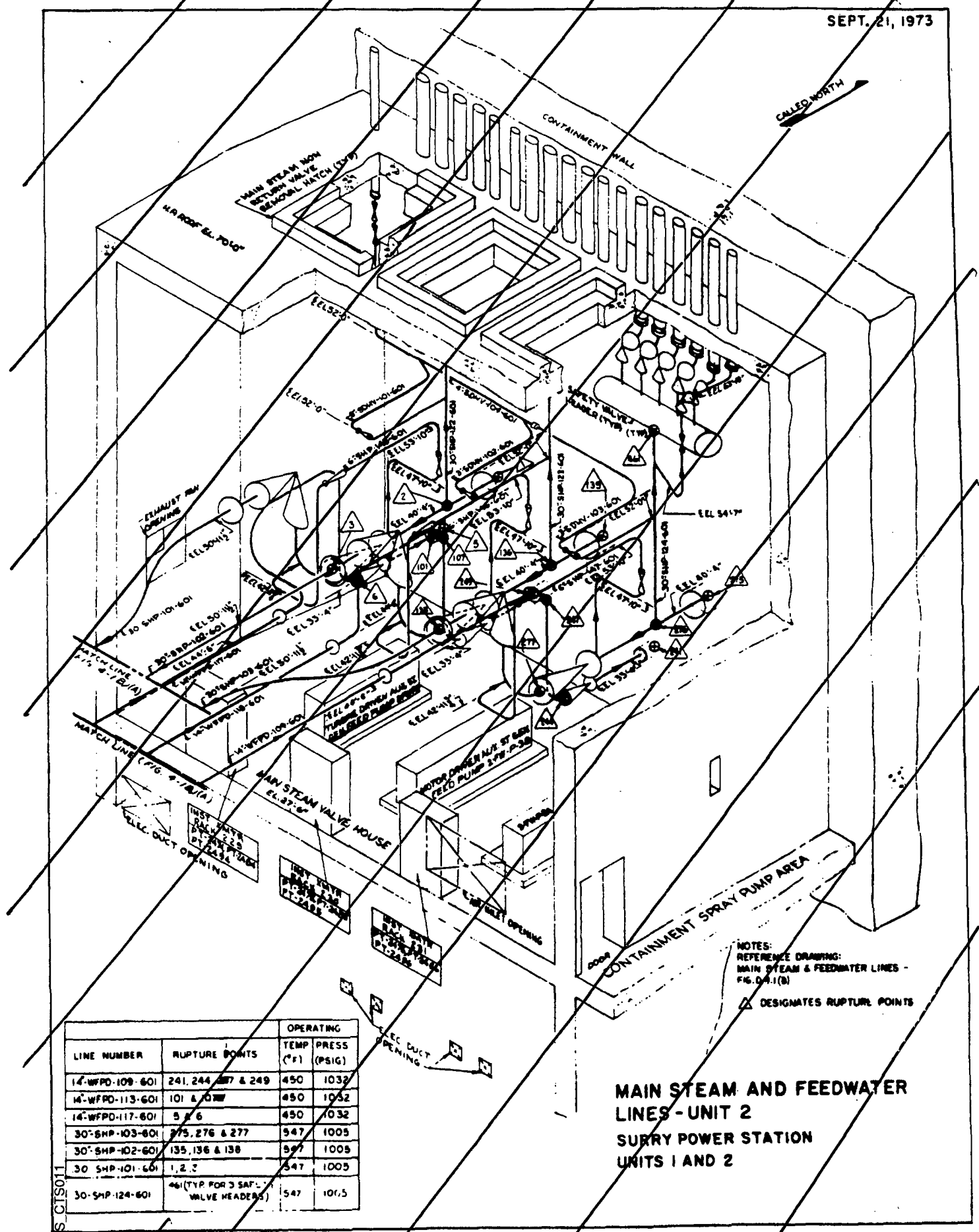
CHANGE NO. 13

Basis

Under normal plant operating conditions, the piping materials operate under ductile conditions and within the stress limits considerably below the ultimate strength properties of the materials. Flaws which could grow under such conditions are generally associated with cyclic loads that fatigue the metal, and to lead to leakage cracks. The inservice examination and the frequency of inspection will provide a means for timely detection even before the flaw penetrates the wall of the piping.

SEPT. 21, 1973

← CALLED NORTH



NOTES:  
 REFERENCE DRAWING:  
 MAIN STEAM & FEEDWATER LINES -  
 FIG. 04.1(B)  
 ▲ DESIGNATES RUPTURE POINTS

LINE NUMBER	RUPTURE POINTS	OPERATING	
		TEMP (°F)	PRESS (PSIG)
14-WFPD-109-601	241, 244, 247 & 249	450	1032
14-WFPD-113-601	101 & 102	450	1032
14-WFPD-117-601	5 & 6	450	1032
30-SHP-103-601	75, 276 & 277	547	1005
30-SHP-102-601	135, 136 & 138	547	1005
30-SHP-101-601	1, 2, 3	547	1005
30-SHP-124-601	96 (TYP FOR 3 SAF. VALVE HEADERS)	547	1015

**MAIN STEAM AND FEEDWATER LINES - UNIT 2**  
**SURRY POWER STATION**  
**UNITS 1 AND 2**

JULY 15, 1967

Amendment Nos. 212 and 212



This page excerpted from Letter Serial No. 13-271 TS 6.4-15  
(5/13/2013) - Approval requested by 4/30/2014

4. Measurement, at designated locations, of the MCR/ESGR envelope pressure relative to all external areas adjacent to the MCR/ESGR envelope boundary during the pressurization mode of operation by one train of the MCR/ESGR EVS, operating at the flow rate required by TS 4.20, at a Frequency of 18 months on a STAGGERED TEST BASIS. The results shall be trended and used as part of the assessment of the MCR/ESGR envelope boundary.
5. The quantitative limits on unfiltered air leakage into the MCR/ESGR envelope. These limits shall be stated in a manner to allow direct comparison to the unfiltered air leakage measured by the testing described in paragraph 3. The unfiltered air leakage limit for radiological challenges is the leakage flow rate assumed in the licensing basis analyses of DBA consequences. Unfiltered air leakage limits for hazardous chemicals must ensure that exposure of MCR/ESGR envelope occupants to these hazards will be within the assumptions in the licensing basis.
6. The provisions of SR 4.0.2 are applicable to the Frequencies for assessing MCR/ESGR envelope habitability, determining MCR/ESGR envelope unfiltered leakage, and measuring MCR/ESGR envelope pressure and assessing the MCR/ESGR envelope boundary as required by paragraphs 3 and 4, respectively.

S. Surveillance Frequency Control Program (SFCP)

This program provides controls for Surveillance Frequencies. The program shall ensure that Surveillance Requirements specified in the Technical Specification are performed at interval sufficient to assure the associated Limiting Conditions for Operation are met.

- a. The Surveillance Frequency Control Program shall contain a list of Frequencies of those Surveillance Requirements for which the Frequency is controlled by the program.
- b. Changes to the Frequencies listed in the Surveillance Frequency Control Program shall be made in accordance with NEI 04-10, "Risk-Informed Method for Control of Surveillance Frequencies," Revision 1.
- c. The provisions of Surveillance Requirements 4.0.2 and 4.0.3 are applicable to the Frequencies established in the Surveillance Frequency Control Program.

T. Inservice Examination, Testing, and Service Life Monitoring Program for Snubbers

This program conforms to the examination, testing, and service life monitoring for dynamic restraints (snubbers) in accordance with 10 CFR 50.55a inservice inspection (ISI) requirements for supports. The program shall be in accordance with the following:

Amendment Nos.

This page is excerpted from Letter Serial No. 13-271  
(5/13/2013) - Approval requested by 4/30/14

TS 6.4-16

- a. This program shall meet 10 CFR 50.55a(g) requirements for supports.
- b. The program shall meet the requirements of ISI of supports set forth in subsequent editions of the Code of Record and addenda of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (BPV) Code and the ASME Code for Operation and Maintenance of Nuclear Power Plants (OM Code) that are incorporated by reference in 10 CFR 50.55a(b), subject to its limitations and modifications, and subject to Commission approval.
- c. The program shall, as allowed by 10 CFR 50.55a(b)(3)(v), meet Subsection ISTA, "General Requirements," and Subsection ISTD, "Preservice and Inservice Examination and Testing of Dynamic Restraints (Snubbers) in Light-Water Reactor Nuclear Power Plants," in lieu of Section XI of the ASME BPV Code ISI requirements for snubbers, or meet authorized alternatives pursuant to 10 CFR 50.55a(a)(3).
- d. The 120-month program updates shall be made in accordance with 10 CFR 50.55a (including 10 CFR 50.55a(b)(3)(v)) subject to the limitations and modifications listed therein.

Insert information from attached page for TS 6.4.U.

INSERT ON PAGE TS 6.4-16:

U. Augmented Inspections and Examinations

The following augmented inspections and examinations have been relocated from the Technical Specifications to the Technical Requirements Manual (TRM):

1. Augmented Inspections - Inservice inspections augmenting those required by ASME Section XI shall be performed to provide the additional assurance necessary for continued integrity of important components involved in safety and plant operation (e.g., the low head safety injection piping in the valve pit, the reactor coolant pump flywheel, the low pressure turbine blades, and sensitized stainless steel).
2. Augmented Inservice Inspection of High Energy Lines Outside of Containment - In accordance with the Augmented Inservice Inspection Program for High Energy Lines Outside of Containment, examinations of welds in the main steam and main feedwater lines in the main steam valve house of each unit shall be performed to provide assurance of the continued integrity of the piping systems over their service lifetime. These requirements apply to welds in piping systems or portions of systems located outside of containment where protection from the consequences of postulated ruptures is not provided by a system of pipe whip restraints, jet impingement barriers, protective enclosures and/or other measures designed specifically to cope with such ruptures.

**Attachment 3**

**PROPOSED TECHNICAL SPECIFICATIONS AND BASES PAGES**

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

TECHNICAL SPECIFICATION  
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<u>SECTION</u>	<u>TITLE</u>	<u>PAGE</u>
3.15	DELETED	
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	DELETED	
3.20	SHOCK SUPPRESSORS (SNUBBERS)	TS 3.20-1
3.21	MAIN CONTROL ROOM/EMERGENCY SWITCHGEAR ROOM (MCR/ESGR) EMERGENCY VENTILATION SYSTEM (EVS)	TS 3.21-1
3.22	AUXILIARY VENTILATION EXHAUST FILTER TRAINS	TS 3.22-1
3.23	MAIN CONTROL ROOM AND EMERGENCY SWITCHGEAR ROOM AIR CONDITIONING SYSTEM	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 (RELOCATED TO TRM)	TS 4.2-1
4.3	DELETED	
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4.5	SPRAY SYSTEMS TESTS	TS 4.5-1
4.6	EMERGENCY POWER SYSTEM PERIODIC TESTING	TS 4.6-1
4.7	MAIN STEAM LINE TRIP VALVES	TS 4.7-1
4.8	AUXILIARY FEEDWATER SYSTEM	TS 4.8-1
4.9	RADIOACTIVE GAS STORAGE MONITORING SYSTEM	TS 4.9-1
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	RCS OPERATIONAL LEAKAGE	TS 4.13-1
4.14	DELETED	

TECHNICAL SPECIFICATION  
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4.15	AUGMENTED INSERVICE INSPECTION PROGRAM FOR HIGH ENERGY LINES OUTSIDE OF CONTAINMENT (RELOCATED TO TRM)	TS 4.15-1
4.16	LEAKAGE TESTING OF MISCELLANEOUS RADIOACTIVE MATERIALS SOURCES	TS 4.16-1
4.17	SHOCK SUPPRESSORS (SNUBBERS)	TS 4.17-1
4.18	MAIN CONTROL ROOM/EMERGENCY SWITCHGEAR ROOM (MCR/ESGR) EMERGENCY VENTILATION SYSTEM (EVS) TESTING	TS 4.18-1
4.19	STEAM GENERATOR (SG) TUBE INTEGRITY	TS 4.19-1
4.20	CONTROL ROOM AIR FILTRATION SYSTEM	TS 4.20-1
5.0	<u>DESIGN FEATURES</u>	TS 5.0-1
5.1	SITE LOCATION	TS 5.0-1
5.2	REACTOR CORE	TS 5.0-1
5.3	FUEL STORAGE	TS 5.0-2
6.0	<u>ADMINISTRATIVE CONTROLS</u>	TS 6.1-1
6.1	ORGANIZATION, SAFETY AND OPERATION REVIEW	TS 6.1-1
6.2	GENERAL NOTIFICATION AND REPORTING REQUIREMENTS	TS 6.2-1
6.3	ACTION TO BE TAKEN IF A SAFETY LIMIT IS EXCEEDED	TS 6.3-1
6.4	UNIT OPERATING PROCEDURES AND PROGRAMS	TS 6.4-1
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

4.2 AUGMENTED INSPECTIONS (RELOCATED TO TRM)

|

Pages TS 4.2-2 through TS 4.2-5 have been deleted.

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4.15 AUGMENTED INSERVICE INSPECTION PROGRAM FOR HIGH ENERGY LINES  
OUTSIDE OF CONTAINMENT (RELOCATED TO TRM) |

Pages TS 4.15-2 through TS 4.15-4 and TS Figure 4.15 have been deleted. |



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