Progress Energy

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SEP 2 6 2007

SERIAL: BSEP 07-0081
TSC-2007-05

10 CFR 50.90

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

Subject: Brunswick Steam Electric Plant, Unit Nos. 1 and 2
Docket Nos. 50-325 and 50-324/License Nos. DPR-71 and DPR-62
Request for License Amendments to Revise Technical Specification 5.5.6, "Inservice Testing Program," to Adopt Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler TSTF-479, Revision 0

Ladies and Gentlemen:

In accordance with the Code of Federal Regulations, Title 10, Part 50.90, Carolina Power & Light Company (CP&L), now doing business as Progress Energy Carolinas, Inc., is requesting a revision to the Technical Specifications (TS) for the Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2. The proposed license amendments implement Technical Specification Task Force (TSTF) Change TSTF-479, Revision 0, "Changes to Reflect Revision of 10 CFR 50.55a." TSTF-479 revises the TS Administrative Controls section pertaining to requirements for the Inservice Testing Program, for consistency with the requirements of 10 CFR 50.55a(f)(4) for pumps and valves which are classified as American Society of Mechanical Engineers (ASME) Code Class 1, Class 2, and Class 3. Revision 3.1 of NUREG-1433, "Standard Technical Specifications General Electric Plants, BWR/4," incorporated TSTF-479, Revision 0. The NRC issued a letter to the TSTF on December 6, 2005, indicating the acceptability of TSTF-479, Revision 0. An evaluation of the proposed license amendments is provided in Enclosure 1.

CP&L has evaluated the proposed change in accordance with 10 CFR 50.91(a)(1), using the criteria in 10 CFR 50.92(c), and determined that this change involves no significant hazards considerations.

CP&L is providing, in accordance with 10 CFR 50.91(b), a copy of the proposed license amendment to the designated representative for the State of North Carolina.

The fourth 10-year inservice testing interval for BSEP, Units 1 and 2 will begin on May 11, 2008. Accordingly, in order to support implementation activities associated with the Inservice Testing Program changes required by 10 CFR 50.55a, CP&L requests approval of the proposed amendments by April 1, 2008, and that once approved, the amendments shall be implemented within 60 days.

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NRR

There are no regulatory commitments associated with this submittal. Please refer any questions regarding this submittal to Mr. Randy C. Ivey, Manager - Support Services, at (910) 457-2447.

I declare, under penalty of perjury, that the foregoing is true and correct. Executed on September 26, 2007.

Sincerely,

James Scarola

WRM/wrm

Enclosures:

1. Evaluation of Proposed License Amendment Requests
2. Marked-up Technical Specification Pages - Unit 1
3. Typed Technical Specification Pages - Unit 1
4. Typed Technical Specification Pages - Unit 2
5. Marked-up Technical Specification Bases Pages - Unit 1 (For Information Only)

cc (with enclosures):

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Evaluation of Proposed License Amendment Requests

Subject: Request for License Amendments to Revise Technical Specification 5.5.6, "Inservice Testing Program," to Adopt Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler TSTF-479, Revision 0

1.0 Description

This letter is a request by Carolina Power & Light Company (CP&L), now doing business as Progress Energy Carolinas, Inc., to amend the Technical Specifications (TS) of Renewed Facility Operating Licenses DPR-71 and DPR-62 for the Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2.

The proposed license amendments implement Technical Specification Task Force (TSTF) Change TSTF-479, Revision 0, "Changes to Reflect Revision of 10 CFR 50.55a." TSTF-479 revises the Improved Technical Specifications (ITS) Administrative Controls, TS 5.5.7, "Inservice Testing Program," for consistency with the requirements of 10 CFR 50.55a(f)(4) for pumps and valves which are classified as American Society of Mechanical Engineers (ASME) Code Class 1, Class 2, and Class 3. Revision 3.1 of NUREG-1433, "Standard Technical Specifications General Electric Plants, BWR/4," incorporated TSTF-479, Revision 0. The NRC issued a letter to the TSTF on December 6, 2005, indicating the acceptability of TSTF-479, Revision 0. CP&L is not proposing any variations or deviations from the TS changes described in TSTF-479, Revision 0.

2.0 Proposed Changes

ITS 5.5.7 corresponds to TS 5.5.6, "Inservice Testing Program," for BSEP, Units 1 and 2. Brunswick TS 5.5.6 is being revised as shown below. The specific changes to Technical Specification 5.5.6 are shown in bold typeface.

Existing Requirement	Proposed Requirement
5.5.6 Inservice Testing Program This program provides controls for inservice testing of ASME Code Class 1, 2, and 3 pumps and valves. a. Testing Frequencies specified in Section XI of the ASME Boiler and Pressure Vessel	5.5.6 Inservice Testing Program This program provides controls for inservice testing of ASME Code Class 1, 2, and 3 pumps and valves. a. Testing Frequencies **applicable to the ASME Code for Operations and**

<table>
<tr><th>Existing Requirement</th><th>Proposed Requirement</th></tr>
<tr><td>Code and applicable Addenda are as follows:

ASME Boiler and Pressure Vessel Code and applicable Addenda terminology for inservice testing activities | Required Frequencies for performing inservice testing activities
Weekly | At least once per 7 days
Monthly | At least once per 31 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

b. The provisions of SR 3.0.2 are applicable to the above required Frequencies for performing inservice testing activities.

c. The provisions of SR 3.0.3 are applicable to inservice testing activities.

d. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any TS.</td><td>Maintenance of Nuclear Power Plants (ASME OM Code) and applicable Addenda as follows:

ASME OM Code and applicable Addenda terminology for inservice testing activities | Required Frequencies for performing inservice testing activities
Weekly | At least once per 7 days
Monthly | At least once per 31 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

b. The provisions of SR 3.0.2 are applicable to the above required Frequencies and other normal accelerated Frequencies specified in the Inservice Testing Program for performing inservice testing activities.

c. The provisions of SR 3.0.3 are applicable to inservice testing activities.

d. Nothing in the ASME OM Code shall be construed to supersede the requirements of any TS.</td></tr>
</table>

TS 5.5.6, "Inservice Testing Program," is being revised to delete references to Section XI of the ASME Boiler and Pressure Vessel Code and incorporate references to the ASME Code for Operation and Maintenance of Nuclear Power Plants (i.e., the ASME OM Code). TS 5.5.6.b is also being revised to address the applicability of Surveillance Requirement (SR) 3.0.2 to other normal and accelerated Frequencies specified in the Inservice Testing (IST) Program.

Enclosure 2 contains a marked-up version of the Unit 1 Technical Specifications showing the proposed changes. Since the affected Technical Specification Section (i.e., TS 5.5.6 for Unit 1 and Unit 2) is identical, only the mark-up for Unit 1 is provided. Enclosures 3 and 4 provide typed versions of the affected Unit 1 and Unit 2 Technical Specification pages, respectively. These typed Technical Specification pages are to be used for issuance of the proposed amendments.

CP&L will make supporting changes to the Technical Specification Bases in accordance with TS 5.5.10, "Technical Specifications (TS) Bases Control Program." Enclosure 5 provides a markup of the affected Technical Specification Bases pages for Unit 1. These pages are being submitted for information only and do not require issuance by the NRC.

3.0 Background

In 1990, the ASME published the initial edition of the ASME OM Code, which provides rules for inservice testing of pumps and valves. The ASME OM Code replaced Section XI of the Boiler and Pressure Vessel Code for inservice testing of pumps and valves. The 1995 edition of the ASME OM Code was incorporated by reference into 10 CFR 50.55a on September 22, 1999. Since 10 CFR 50.55a(f)(4)(ii) requires that inservice testing during successive 10-year intervals comply with the requirements of the latest edition and addenda of the Code incorporated into 10 CFR 50.55a(b), TS 5.5.6 must be revised to reference the ASME OM Code.

4.0 Technical Analysis

Section XI of the ASME Code has been revised, on a continuing basis, to provide updated requirements for the inservice inspection and inservice testing of components. Until 1990, the ASME Code requirements addressing the inservice testing of pumps and valves were contained in Section XI, Subsections IWP (i.e., for pumps) and IWV (i.e., for valves). In 1990, the ASME published the initial edition of the OM Code, which provides the rules for the inservice testing of pumps and valves. Since the establishment of the 1990 Edition of the OM Code, the rules for inservice testing are no longer being updated in Section XI. As identified in NRC SECY-99-017 dated January 13, 1999, the NRC has generally considered the evolution of the ASME Code to result in a net improvement in the measures for inspecting piping and components and testing pumps and valves.

By Final Rule issued on September 22, 1999 (i.e., 64 FR 51370), the NRC amended 10 CFR 50.55a(f)(4)(ii) to require licensees to update their IST Program to the latest approved edition of the ASME OM Code incorporated by reference into 10 CFR 50.55a(b). TS 5.5.6 currently references the ASME Boiler and Pressure Vessel Code, Section XI, as the

source of the IST Program requirements for ASME Code Class 1, Class 2, and Class 3 components.

The third 10-year inservice testing interval for BSEP, Units 1 and 2 began May 11, 1998, and will conclude on May 10, 2008. The Code of record for the third 10-year inservice testing interval has been the 1989 Edition of ASME Code, Section XI, with no addenda. The fourth 10-year inservice testing interval for BSEP, Units 1 and 2 will begin May 11, 2008, and the Code of record for the interval will be the 2001 Edition of the ASME OM Code with 2003 Addenda. The proposed changes to TS 5.5.6 are necessary to achieve consistency with the inservice testing requirements of 10 CFR 50.55a, beginning with the fourth inservice testing interval.

Additionally, TS 5.5.6 is being revised to indicate the provisions of SR 3.0.2 are applicable to other inservice testing Frequencies that are not specifically listed in the testing frequencies that are identified in TS 5.5.6. The IST Program may have frequencies for testing that are based on risk or other factors and do not conform to the standard testing Frequencies specified in TS 5.5.6. The Frequency of the Surveillance may be determined through a mix of risk-informed and performance-based means in accordance with the IST Program. Application of SR 3.0.2 to other inservice testing frequencies is consistent with the guidance contained in NUREG-1482, Revision 1, "Guidelines for Inservice Testing at Nuclear Power Plants," January 2005, which indicates that the 25 percent extension of the interval specified in the Frequency would apply to increased frequencies the same way that it applies to regular frequencies. If a test interval is specified in 10 CFR 50.55a, the TS SR 3.0.2 Bases indicates that the requirements of the regulation take precedence over the TS.

5.0 Regulatory Safety Analysis

5.1 No Significant Hazards Consideration

Carolina Power & Light Company (CP&L), now doing business as Progress Energy Carolinas, Inc., is submitting proposed amendments to implement Technical Specification Task Force (TSTF) Change TSTF-479, Revision 0, "Changes to Reflect Revision of 10 CFR 50.55a." TSTF-479 revises the Improved Technical Specifications (ITS) Administrative Controls, TS 5.5.7, "Inservice Testing Program," for consistency with the requirements of 10 CFR 50.55a(f)(4) for pumps and valves which are classified as American Society of Mechanical Engineers (ASME) Code Class 1, Class 2, and Class 3. Revision 3.1 of NUREG-1433, "Standard Technical Specifications General Electric Plants, BWR/4," incorporated TSTF-479, Revision 0. The NRC issued a letter to the TSTF on December 6, 2005, indicating the acceptability of TSTF-479, Revision 0.

CP&L has evaluated whether or not a significant hazards consideration is involved with the proposed amendments by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

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

   Response: No

   The proposed change revises TS 5.5.6, "Inservice Testing Program," for consistency with the requirements of 10 CFR 50.55a(f)(4) regarding the inservice testing of pumps and valves which are classified as ASME Code Class 1, Class 2, and Class 3. The proposed change incorporates revisions to the ASME Code that result in a net improvement in the measures for testing pumps and valves.

   The proposed change does not impact any accident initiators or analyzed events or assumed mitigation of accident or transient events. The proposed change does not involve the addition or removal of any equipment, or any design changes to the facility. Therefore, this proposed change does not involve an increase in the probability or consequences of an accident previously evaluated.

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

   Response: No

   The proposed change revises TS 5.5.6, "Inservice Testing Program," for consistency with the requirements of 10 CFR 50.55a(f)(4) regarding the inservice testing of pumps and valves which are classified as ASME Code Class 1, Class 2, and Class 3. The proposed change incorporates revisions to the ASME Code that result in a net improvement in the measures for testing pumps and valves.

   The proposed change does not involve a modification to the physical configuration of the plant (i.e., no new equipment will be installed) or involve a change in the methods governing normal plant operation. The proposed change will not impose any new or different requirements or introduce a new accident initiator, accident precursor, or malfunction mechanism. Additionally, there is no change in the types or increases in the amounts of any effluent that may be released offsite and there is no increase in individual or cumulative occupational exposure. Therefore, the proposed change does not create the possibility of an accident of a different kind than previously evaluated.

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

Response: No

The proposed change revises TS 5.5.6, "Inservice Testing Program," for consistency with the requirements of 10 CFR 50.55a(f)(4) regarding the inservice testing of pumps and valves which are classified as ASME Code Class 1, Class 2, and Class 3. The proposed change does not involve a modification to the physical configuration of the plant (i.e., no new equipment will be installed) or change the methods governing normal plant operation. The proposed change incorporates revisions to the ASME Code that result in a net improvement in the measures for testing pumps and valves. The safety function of the affected pumps and valves will be maintained. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, CP&L concludes that the proposed amendments present no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

5.2 Applicable Regulatory Requirements/Criteria

NRC regulation, 10 CFR 50.55a, defines the requirements for applying industry codes to each licensed nuclear power facility. The regulations require that during successive 120-month intervals, inservice inspection and inservice testing programs be developed using the latest edition and addenda of the ASME Code incorporated into paragraph (b) of 10 CFR 50.55a on the date 12 months prior to the start of the 120-month interval, subject to the limitations and modifications identified in paragraph (b).

The proposed amendments do not:

(1) Alter the design or function of any system;
(2) Result in any change in the qualifications of any component; and
(3) Result in the reclassification of any component's status in the areas of shared, safety-related, independent, redundant, and physically or electrically separated.

As such, there are no changes being proposed such that compliance with any of the regulatory requirements of 10 CFR 50.55a would come into question. Based on these considerations, discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

6.0 Environmental Considerations

CP&L has evaluated the proposed amendments for environmental considerations. A review has determined that the proposed amendments would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed amendments do not involve: (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendments meet the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendments.

7.0 References

1. ASME Code for Operation and Maintenance of Nuclear Power Plants, 2001 Edition through 2003 Addenda.

2. 10 CFR 50.55a, "Codes and standards"

3. NUREG-1482, Revision 1, "Guidelines for Inservice Testing at Nuclear Power Plants," January 2005.

4. Federal Register, Volume 64, No. 183, page 51370, "Final Rule, Industry Codes and Standards; Amended Requirements."

5. Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTF-479, Revision 0, "Changes to Reflect Revision of 10 CFR 50.55a."

8.0 Precedents

1. Watts Bar Nuclear Plant, Unit 1, "Issuance of Amendment Regarding the Inservice Testing Program (TAC No. MD2380) (TS-06-04)," December 18, 2006, ADAMS Accession Numbers ML063190441 and ML063550029.

2. Cooper Nuclear Station, "Issuance of Amendment Re: Technical Specification (TS) Changes Associated With Inservice Testing Program, Section 5.5.6, Under TS Programs and Manuals (TAC No. MD0335)," September 6, 2006, ADAMS Accession Numbers ML061440049 and ML062500301.

3. Wolf Creek Generating Station, "Issuance of Amendment Re: Revision to Technical Specification 5.5.8 on the Inservice Testing Program (TAC No. MC9726)" November 15, 2006, ADAMS Accession Numbers ML062980233 and ML062980235.

4. Diablo Canyon Power Plant, Unit Nos. 1 and 2, "Issuance of Amendments Re: Administrative Changes to the Technical Specification 5.5.8, 'Inservice Testing Program' (TAC Nos. MD3975 and MD3976)," June 25, 2007, ADAMS Accession Numbers ML070990057 and ML070990074.

Markup of Technical Specification Pages - Unit 1

5.5.4 Radioactive Effluent Controls Program (continued)

h. Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas beyond the site boundary shall be limited to the following:

1. For noble gases: less than or equal to a dose rate of 500 mrems/yr to the total body and less than or equal to a dose rate of 3000 mrems/yr to the skin, and

2. For iodine-131, iodine-133, tritium, and for all radionuclides in particulate form with half lives > 8 days: less than or equal to a dose rate of 1500 mrems/yr to any organ;

i. Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I;

j. Limitations on the annual and quarterly doses to a member of the public from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half lives > 8 days in gaseous effluents released from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I; and

k. Limitations on the annual dose or dose commitment to any member of the public due to releases of radioactivity and to radiation from uranium fuel cycle sources, conforming to 40 CFR 190.

5.5.5 Component Cyclic or Transient Limit

This program provides controls to track the UFSAR Table 5.3.3-2, cyclic and transient occurrences to ensure that components are maintained within the design limits.

5.5.6 Inservice Testing Program

This program provides controls for inservice testing of ASME Code Class 1, 2, and 3 pumps and valves.

a. Testing Frequencies specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda are as follows:

(continued)

applicable to the ASME Code for Operations and Maintenance of Nuclear Power Plants (ASME OM Code)

5.5 Programs and Manuals

5.5.6 Inservice Testing Program (continued)

ASME Boiler and Pressure Vessel Code and applicable Addenda terminology for inservice testing activities	Required Frequencies for performing inservice testing activities
Weekly	At least once per 7 days
Monthly	At least once per 31 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

and other normal and accelerated Frequencies specified in the Inservice Test Program

b. The provisions of SR 3.0.2 are applicable to the above required Frequencies for performing inservice testing activities;

c. The provisions of SR 3.0.3 are applicable to inservice testing activities; and

d. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any TS.

5.5.7 Ventilation Filter Testing Program (VFTP)

The VFTP shall establish the required testing of Engineered Safety Feature (ESF) filter ventilation systems.

Tests described in Specification 5.5.7.a and 5.5.7.b shall be performed once per 24 months; after each complete or partial replacement of the HEPA filter bank or charcoal adsorber filter bank; after any structural maintenance on the HEPA filter or charcoal adsorber housing; and, following significant painting, fire, or chemical release in any ventilation zone communicating with the system.

(continued)

Typed Technical Specification Pages - Unit 1

5.5 Programs and Manuals

5.5.4 Radioactive Effluent Controls Program (continued)

h. Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas beyond the site boundary shall be limited to the following:

1. For noble gases: less than or equal to a dose rate of 500 mrems/yr to the total body and less than or equal to a dose rate of 3000 mrems/yr to the skin, and

2. For iodine-131, iodine-133, tritium, and for all radionuclides in particulate form with half lives > 8 days: less than or equal to a dose rate of 1500 mrems/yr to any organ;

i. Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I;

j. Limitations on the annual and quarterly doses to a member of the public from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half lives > 8 days in gaseous effluents released from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I; and

k. Limitations on the annual dose or dose commitment to any member of the public due to releases of radioactivity and to radiation from uranium fuel cycle sources, conforming to 40 CFR 190.

5.5.5 Component Cyclic or Transient Limit

This program provides controls to track the UFSAR Table 5.3.3-2, cyclic and transient occurrences to ensure that components are maintained within the design limits.

5.5.6 Inservice Testing Program

This program provides controls for inservice testing of ASME Code Class 1, 2, and 3 pumps and valves.

a. Testing Frequencies applicable to the ASME Code for Operations and Maintenance of Nuclear Power Plants (ASME OM Code) and applicable Addenda are as follows:

(continued)

5.5 Programs and Manuals

5.5.6 Inservice Testing Program (continued)

ASME OM Code and applicable Addenda terminology for inservice testing activities	Required Frequencies for performing inservice testing activities
Weekly	At least once per 7 days
Monthly	At least once per 31 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

b. The provisions of SR 3.0.2 are applicable to the above required Frequencies and other normal accelerated Frequencies specified in the Inservice Testing Program for performing inservice testing activities;

c. The provisions of SR 3.0.3 are applicable to inservice testing activities; and

d. Nothing in the ASME OM Code shall be construed to supersede the requirements of any TS.

5.5.7 Ventilation Filter Testing Program (VFTP)

The VFTP shall establish the required testing of Engineered Safety Feature (ESF) filter ventilation systems.

Tests described in Specification 5.5.7.a and 5.5.7.b shall be performed once per 24 months; after each complete or partial replacement of the HEPA filter bank or charcoal adsorber filter bank; after any structural maintenance on the HEPA filter or charcoal adsorber housing; and, following significant painting, fire, or chemical release in any ventilation zone communicating with the system.

(continued)

Typed Technical Specification Pages - Unit 2

5.5.4 Radioactive Effluent Controls Program (continued)

h. Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas beyond the site boundary shall be limited to the following:

1. For noble gases: less than or equal to a dose rate of 500 mrems/yr to the total body and less than or equal to a dose rate of 3000 mrems/yr to the skin, and

2. For iodine-131, iodine-133, tritium, and for all radionuclides in particulate form with half lives > 8 days: less than or equal to a dose rate of 1500 mrems/yr to any organ;

i. Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I;

j. Limitations on the annual and quarterly doses to a member of the public from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half lives > 8 days in gaseous effluents released from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I; and

k. Limitations on the annual dose or dose commitment to any member of the public due to releases of radioactivity and to radiation from uranium fuel cycle sources, conforming to 40 CFR 190.

5.5.5 Component Cyclic or Transient Limit

This program provides controls to track the UFSAR Table 5.3.3-2, cyclic and transient occurrences to ensure that components are maintained within the design limits.

5.5.6 Inservice Testing Program

This program provides controls for inservice testing of ASME Code Class 1, 2, and 3 pumps and valves.

a. Testing Frequencies applicable to the ASME Code for Operations and Maintenance of Nuclear Power Plants (ASME OM Code) and applicable Addenda are as follows:

(continued)

5.5 Programs and Manuals

5.5.6 Inservice Testing Program (continued)

ASME OM Code and applicable Addenda terminology for inservice testing activities	Required Frequencies for performing inservice testing activities
Weekly	At least once per 7 days
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Yearly or annually	At least once per 366 days
Biennially or every 2 years	At least once per 731 days

b. The provisions of SR 3.0.2 are applicable to the above required Frequencies and other normal accelerated Frequencies specified in the Inservice Testing Program for performing inservice testing activities;

c. The provisions of SR 3.0.3 are applicable to inservice testing activities; and

d. Nothing in the ASME OM Code shall be construed to supersede the requirements of any TS.

5.5.7 Ventilation Filter Testing Program (VFTP)

The VFTP shall establish the required testing of Engineered Safety Feature (ESF) filter ventilation systems.

Tests described in Specification 5.5.7.a and 5.5.7.b shall be performed once per 24 months; after each complete or partial replacement of the HEPA filter bank or charcoal adsorber filter bank; after any structural maintenance on the HEPA filter or charcoal adsorber housing; and, following significant painting, fire, or chemical release in any ventilation zone communicating with the system.

(continued)

BSEP 07-0081
Enclosure 5

Marked-up Technical Specification Bases Pages - Unit 1
(For Information Only)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.4.3.2 (continued)

the turbine control valves or bypass valves, by a change in the measured steam flow, or by any other method suitable to verify steam flow. Adequate reactor steam dome pressure must be available to perform this test to avoid damaging the valve. Sufficient time is therefore allowed after the required pressure is achieved to perform this test. Adequate pressure at which this test is to be performed, to avoid damaging the valve, is 945 psig. Plant startup is allowed prior to performing this test because valve OPERABILITY and the setpoints for overpressure protection are verified, per ASME Code requirements, prior to valve installation. Therefore, this SR is modified by a Note that states the Surveillance is not required to be performed until 12 hours after reactor steam pressure is adequate to perform the test. The 12 hours allowed for manual actuation after the required pressure is reached is sufficient to achieve stable conditions for testing and provides a reasonable time to complete the SR. If a valve fails to actuate due only to the failure of the solenoid but is capable of opening on overpressure, the safety function of the SRV is considered OPERABLE.

OM

The 24 month Frequency was developed based on the SRV tests required by the ASME Boiler and Pressure Vessel Code, Section XI (Ref. 5). Operating experience has demonstrated that these components will usually pass the Surveillance when performed at the 24 month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

REFERENCES

1. UFSAR, Section 5.2.2.2.
2. NEDC-32466P, Power Uprate Safety Analysis Report for Brunswick Steam Electric Plant Units 1 and 2, Supplement 1, March 1996.
3. UFSAR, Chapter 15.
4. 10 CFR 50.36(c)(2)(ii).
5. ASME, Boiler and Pressure Vessel Code, Section XI.

ASME Code for Operation and Maintenance of Nuclear Power Plants.

BASES

SURVEILLANCE REQUIREMENTS

SR 3.5.1.5 (continued)

92 days, but is considered acceptable due to the demonstrated reliability of these valves. If the valve is inoperable and in the open position, the associated LPCI subsystem must be declared inoperable.

SR 3.5.1.6, SR 3.5.1.7, and SR 3.5.1.8

The performance requirements of the low pressure ECCS pumps are determined through application of the 10 CFR 50, Appendix K criteria (Ref. 7). This periodic Surveillance is performed (in accordance with the ASME Code, Section XI, requirements for the ECCS pumps) to verify that the ECCS pumps will develop the flow rates required by the respective analyses. The low pressure ECCS pump flow rates ensure that adequate core cooling is provided to satisfy the acceptance criteria of Reference 9. The pump flow rates are verified against a system head equivalent to the RPV pressure expected during a LOCA. The test includes starting the associated low pressure ECCS pump from the control room. The total system pump outlet pressure is adequate to overcome the elevation head pressure between the pump suction and the vessel discharge, the piping friction losses, and RPV pressure present during a LOCA. For the test that verifies the combined flow rate of both LPCI pumps in a LPCI subsystem, the flow is verified by monitoring the flow through the common loop discharge header.

The flow tests for the HPCI System are performed at two different pressure ranges such that system capability to provide rated flow is tested at both the higher and lower operating ranges of the system. Reactor steam pressure must be $\geq$ 945 psig to perform SR 3.5.1.7 and $\geq$ 150 psig to perform SR 3.5.1.8. Therefore, sufficient time is allowed after adequate pressure is achieved to perform these tests. Reactor startup is allowed prior to performing the low pressure Surveillance test because the reactor pressure is low and the time allowed to satisfactorily perform the Surveillance test is relatively short. Reactor pressure is allowed to be increased to normal operating pressure since it is assumed that the low pressure HPCI test has been satisfactorily completed and there is no indication or reason to believe that the HPCI System is inoperable.

(continued)

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.2.3.2

Verifying that each RHR pump develops a flow rate ≥ 7700 gpm while operating in the suppression pool cooling mode with flow through the associated heat exchanger ensures that the primary containment pressure and temperature can be maintained below the design limits during a DBA (Ref. 2). The normal test of centrifugal pump performance required by ASME Code, Section XI (Ref. 4) is covered by the requirements of LCO 3.5.1, "ECCS—Operating." This test confirms one point on the pump design curve, and the results are indicative of overall performance. Such tests confirm component OPERABILITY, and detect incipient failures by indicating abnormal performance. The Frequency of this SR is 92 days.

OM

REFERENCES

1. UFSAR, Section 6.2.1.1.3.2.
2. NEDC-32466P, Power Uprate Safety Analysis Report for Brunswick Steam Electric Plant Units 1 and 2, September 1995.
3. 10 CFR 50.36(c)(2)(ii).
4. ASME Boiler and Pressure Vessel Code, Section XI.

ASME Code for Operation and Maintenance of Nuclear Power Plants.