Dominion Energy Nuclear Connecticut, Inc.
5000 Dominion Boulevard, Glen Allen, VA 23060
DominionEnergy.com

December 17, 2019

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

Serial No 19-441
NRA/SS R1
Docket No. 50-336
License No. DPR-65

DOMINION ENERGY NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION UNIT 2
LICENSE AMENDMENT REQUEST TO REVISE TS 6.25, PRE-STRESSED CONCRETE CONTAINMENT TENDON SURVEILLANCE PROGRAM

Pursuant to 10 CFR 50.90, Dominion Energy Nuclear Connecticut, Inc. (DENC) hereby requests an amendment to Facility Operating License No. DPR-65 for Millstone Power Station Unit 2 (MPS2). The proposed amendment would revise Technical Specification (TS) 6.25, "Pre-Stressed Concrete Containment Tendon Surveillance Program," to replace the reference to Regulatory Guide (RG) 1.35 with a reference to Section XI, Subsection IWL of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code. DENC also proposes to delete the provisions of Surveillance Requirement 4.0.2 in TS 6.25.

The requirements of 10 CFR 50.55a were amended by the Nuclear Regulatory Commission (NRC) in Federal Register 61 FR 41303 to incorporate, by reference, Subsections IWE and IWL of Section XI of the ASME B&PV Code. This amendment went into effect for inspection of containments of light water-cooled reactors on September 9, 1996. Following this change, DENC revised the containment inservice inspection program for MPS2 to implement the new requirements of ASME Section XI, Subsections IWE and IWL, which also meets the RG 1.35 requirements.

Because of these changes to 10 CFR 50.55a, RG 1.35 was subsequently withdrawn by the NRC in August 2015 in 80 FR 52067. The withdrawal did not affect the MPS2 licensing bases requirement to use RG 1.35, as 80 FR 52067 stated that it did not alter any prior or existing licensing commitments based on its use. However, the withdrawal acknowledged that the guidance provided in RG 1.35 was incorporated into later revisions of Subsection IWL, or preserved in 10 CFR 50.55a. The NRC stated that as a result, RG 1.35 became redundant and was no longer needed. Therefore, DENC proposes to revise TS 6.25 to replace the reference to RG 1.35 with a reference to ASME Section XI, Subsection IWL, to align the MPS2 TS with 10 CFR 50.55a and the containment inservice inspection program.

Attachment 1 provides a description and evaluation of the proposed license amendment request. Attachment 2 provides a marked-up version of the proposed TS page.

DENC has reviewed the three criteria set forth in 10 CFR 50.92(c) and determined that the proposed amendment does not involve a significant hazards consideration. The

Issuance of this amendment is requested by December 31, 2020 with the amendment to be implemented within 60 days following NRC approval.

In accordance with 10 CFR 50.91(b), a copy of this request is being provided to the State of Connecticut.

Should you have any questions in regard to this submittal, please contact Shayan Sinha at (804) 273-4687.

Sincerely,

Mark D. Sartain
Vice President – Nuclear Engineering and Fleet Support

COMMONWEALTH OF VIRGINIA)
)
COUNTY OF HENRICO)

The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by Mark D. Sartain, who is Vice President – Nuclear Engineering and Fleet Support of Dominion Energy Nuclear Connecticut, Inc. He has affirmed before me that he is duly authorized to execute and file the foregoing document in behalf of that Company, and that the statements in the document are true to the best of his knowledge and belief.

Acknowledged before me this 17th day of December, 2019.

My Commission Expires: March 31, 2022

DIANE E. AITKEN
NOTARY PUBLIC
REG. #7763114
COMMONWEALTH OF VIRGINIA
MY COMMISSION EXPIRES MARCH 31, 2022

Notary Public

Commitments: None

Attachments:

1. Description and Evaluation of Proposed License Amendment Request
2. Mark-up of Technical Specification Page

cc: U.S. Nuclear Regulatory Commission
Region I
2100 Renaissance Blvd, Suite 100
King of Prussia, PA 19406-2713

R. V. Guzman
NRC Senior Project Manager
U.S. Nuclear Regulatory Commission
One White Flint North, Mail Stop 08 C2
11555 Rockville Pike
Rockville, MD 20852-2738

NRC Senior Resident Inspector
Millstone Power Station

Director, Radiation Division
Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

ATTACHMENT 1

DESCRIPTION AND EVALUATION OF PROPOSED LICENSE AMENDMENT REQUEST

DOMINION ENERGY NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION UNIT 2

Description and Evaluation of Proposed License Amendment Request

1.0 SUMMARY DESCRIPTION

Pursuant to 10 CFR 50.90, Dominion Energy Nuclear Connecticut, Inc. (DENC) hereby requests an amendment to Facility Operating License No. DPR-65 for Millstone Power Station Unit 2 (MPS2). The proposed amendment would revise Technical Specification (TS) 6.25, "Pre-Stressed Concrete Containment Tendon Surveillance Program," to replace the reference to Regulatory Guide (RG) 1.35 with a reference to Section XI, Subsection IWL of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code. DENC also proposes to delete the provisions of Surveillance Requirement (SR) 4.0.2 in TS 6.25.

The requirements of 10 CFR 50.55a were amended by the Nuclear Regulatory Commission (NRC) in Federal Register 61 FR 41303 to incorporate, by reference, Subsections IWE and IWL of Section XI of the ASME B&PV Code. This amendment went into effect for inspection of containments of light water-cooled reactors on September 9, 1996. Following this change, DENC revised the containment inservice inspection program for MPS2 to implement the new requirements of ASME Section XI, Subsections IWE and IWL, which also meets the RG 1.35 requirements.

Because of these changes to 10 CFR 50.55a, RG 1.35 was subsequently withdrawn by the NRC in August 2015 in 80 FR 52067. The withdrawal did not affect the MPS2 licensing bases requirement to use RG 1.35, as 80 FR 52067 stated that it did not alter any prior or existing licensing commitments based on its use. However, the withdrawal acknowledged that the guidance provided in RG 1.35 was incorporated into later revisions of Subsection IWL, or preserved in 10 CFR 50.55a. The NRC stated that as a result, RG 1.35 became redundant and was no longer needed. Therefore, DENC proposes to revise TS 6.25 to replace the reference to RG 1.35 with a reference to ASME Section XI, Subsection IWL, to align the MPS2 TS with 10 CFR 50.55a and the containment inservice inspection program.

2.0 DETAILED DESCRIPTION

DENC proposes to revise TS 6.25 to replace reference to Regulatory Guide 1.35 with a reference to Section XI, Subsection IWL of the ASME B&PV Code. The proposed TS change is shown below (deleted text is struck through while added text is italicized and bolded).

> The Tendon Surveillance Program, inspection frequencies, and acceptance criteria shall be in accordance with ~~Regulatory Guide 1.35, Revision 3, 1989~~ ***Section XI, Subsection IWL of the ASME Boiler and Pressure Vessel Code and applicable addenda as required by 10 CFR 50.55a, except where an exemption or relief has been authorized by the NRC***.

Additionally, DENC proposes to delete the applicability of SR 4.0.2 to the tendon surveillance inspection frequencies as shown below (deleted text is struck through).

> The provisions of Surveillance Requirements ~~4.0.2 and~~ 4.0.3 are applicable to the Tendon Surveillance inspection frequencies.

A mark-up of TS 6.25 for the proposed changes is provided in Attachment 2.

3.0 TECHNICAL EVALUATION

The MPS2 containment is a reinforced and post-tensioned concrete pressure vessel that serves as the final barrier (after fuel cladding and the reactor coolant system pressure boundary) against release of radioactive material from the reactor core to the outside environment. The major structural elements of the containment are a cylinder wall, a ring girder, a shallow dome roof and a flat foundation mat. The cylinder and dome are pre-stressed; the foundation mat is conventionally reinforced (not pre-stressed). The ring girder serves as a transition between the cylinder and the dome and provides anchorage for both vertical and dome pre-stressed tendons. The cylinder incorporates three equally spaced buttresses that provide anchorage for the circumferential pre-stressed tendons. A carbon steel liner covers the inside surface of the containment and ensures a high degree of leak tightness during operating and accident conditions.

Containment inservice inspection requirements originated with the issuance of RG 1.35, "Inservice Surveillance of Ungrouted Tendons in Prestressed Concrete Containment Structures" in February 1973. The final revision, Revision 3, was issued in July 1990. MPS2 TS 6.25, "Pre-Stressed Concrete Containment Tendon Surveillance Program," states in part, "The Tendon Surveillance Program, inspection frequencies, and acceptance criteria shall be in accordance with Regulatory Guide 1.35, Revision 3, 1989." This program provides controls for monitoring any tendon degradation in pre-stressed concrete containments, including effectiveness of its corrosion protection medium, to ensure containment structural integrity.

A final rule amending 10 CFR 50.55a, "Codes and Standards," was issued by the NRC in 61 FR 41303 requiring licensees to implement, by September 9, 2001, the requirements of the ASME B&PV Code, Section XI, Subsections IWE and IWL. This rule went into effect for the inspection of containments of light water-cooled reactors on September 9, 1996. Subsection IWE delineates the requirements for inservice inspection of Class MC (metallic containment) components and the metallic liner of Class CC (concrete containment) components. Subsection IWL delineates the requirements for inservice inspection of concrete containments. The revised regulation contained several modifications and supplemental requirements to assure that the critical areas of containments are routinely inspected to detect, and take corrective action for, defects that could compromise its structural integrity. Following this change, DENC revised the containment inservice inspection program for MPS2 to implement the new requirements of ASME Section XI, Subsections IWE and IWL.

Because of the changes to 10 CFR 50.55a, which incorporated, by reference, the requirements of ASME Section XI, Subsection IWL, RG 1.35 was rendered obsolete. Therefore in August 2015, the NRC withdrew RG 1.35. The withdrawal did not affect the licensing bases of MPS2, as 80 FR 52067 stated that it did not alter any prior or existing licensing commitments based on its use. However, the withdrawal acknowledged that the guidance provided in RG 1.35 was incorporated into later revisions of Subsection IWL, or preserved in 10 CFR 50.55a. The NRC stated that as a result, RG 1.35 became redundant and was no longer needed.

10 CFR 50.55a(g)(5)(ii) requires that if a revised inservice inspection program for a facility conflicts with the TSs for the facility, the licensee must apply to the NRC for an amendment to restore conformance between the TSs and the revised program. Therefore, DENC proposes to revise TS 6.25 to replace the reference to RG 1.35 with a reference to ASME Section XI, Subsection IWL, to align the MPS2 TS with 10 CFR 50.55a and the containment inservice inspection program. This change provides clarity and reduces the potential for human error by eliminating multiple, redundant, governing standards for containment tendon surveillance.

Additionally, DENC proposes to delete the applicability of SR 4.0.2 to the tendon surveillance inspection frequencies. SR 4.0.2 states that each Surveillance Requirement shall be performed within the specified time interval with a maximum allowable extension not to exceed 25% of the surveillance time interval. Since the tendon inspection frequencies will be in accordance with ASME Section XI, Subsection IWL, which specifies requirements for extending inspection frequencies, the provisions of SR 4.0.2 are no longer needed for the Tendon Surveillance Program.

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

General Design Criterion 53 of 10 CFR 50, Appendix A, requires that the containment be designed to permit periodic inspection of all important areas and permit an appropriate surveillance program.

Section 50.55a(b)(2)(vi) of 10 CFR requires that licensees that implemented the expedited examination of containment, in accordance with Subsection IWE and Subsection IWL, during the period from September 9, 1996, to September 9, 2001, may use either the 1992 Edition with the 1992 Addenda or the 1995 Edition with the 1996 Addenda of Subsection IWE and Subsection IWL, as conditioned by the requirements in paragraphs (b)(2)(viii) and (ix) of this section, when implementing the initial 120-month inspection interval for the containment inservice inspection requirements of this section. Successive 120-month interval updates must be implemented in accordance with paragraph (g)(4)(ii) of this section.

Section 50.55a(g)(4) of 10 CFR requires, in part, that throughout the service of a boiling or pressurized water-cooled nuclear power facility, components (including supports) that are classified as ASME Code Class 1, Class 2, and Class 3 must meet the requirements,

except design and access provisions and preservice examination requirements, set forth in Section XI of editions and addenda of the ASME B&PV Code that become effective subsequent to editions specified in paragraphs (g)(2) and (g)(3) of 10 CFR 50.55a and that are incorporated by reference in paragraph (a)(1)(ii) of 10 CFR 50.55a, to the extent practical within the limitations of design, geometry and materials of construction of the components.

Section 50.55a(g)(5)(i) of 10 CFR requires that the inservice inspection program for a boiling or pressurized water-cooled nuclear power facility must be revised by the licensee, as necessary, to meet the requirements of paragraph (g)(4) of 10 CFR 50.55a.

Section 50.55a(g)(5)(ii) of 10 CFR requires that if a revised inservice inspection program for a facility conflicts with the technical specifications for the facility, the licensee must apply to the Commission for amendment of the technical specifications to conform the technical specifications to the revised program.

4.2 No Significant Hazards Consideration

Pursuant to 10 CFR 50.90, Dominion Energy Nuclear Connecticut, Inc. (DENC) is requesting an amendment to Operating License DPR-65 for Millstone Power Station Unit 2 (MPS2). The proposed amendment would revise Technical Specification (TS) 6.25, "Pre-Stressed Concrete Containment Tendon Surveillance Program," to replace the reference to Regulatory Guide (RG) 1.35 with a reference to Section XI, Subsection IWL of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (B&PV). DENC also proposes to delete the provisions of Surveillance Requirement (SR) 4.0.2 in TS 6.25.

The requirements of 10 CFR 50.55a were amended (61 FR 41303) by the Nuclear Regulatory Commission (NRC) to incorporate, by reference, Subsections IWE and IWL of Section XI of the ASME B&PV Code. This amendment went into effect for inspection of containments of light water-cooled reactors on September 9, 1996. Following this change, DENC revised the containment inservice inspection program for MPS2 to implement the new requirements of ASME Section XI, Subsections IWE and IWL, which also meets the RG 1.35 requirements.

Because of changes to 10 CFR 50.55a, RG 1.35 was subsequently withdrawn by the NRC in August 2015 in 80 FR 52067. The withdrawal did not affect the MPS2 licensing bases requirement to use RG 1.35, as 80 FR 52067 stated that it did not alter any prior or existing licensing commitments based on its use. However, the withdrawal acknowledged that the guidance provided in RG 1.35 was incorporated into later revisions of Subsection IWL, or preserved in 10 CFR 50.55a. The NRC stated that as a result, RG 1.35 became redundant and was no longer needed. Therefore, DENC proposes to revise TS 6.25 to replace the reference to RG 1.35 with a reference to ASME Section XI, Subsection IWL, to align the MPS2 TS with 10 CFR 50.55a and the containment inservice inspection program. Additionally, since the tendon inspection frequencies will be in accordance with ASME Section XI, Subsection IWL, the provisions of SR 4.0.2 are no longer needed for the Tendon Surveillance Program.

DENC has determined that the proposed amendment does not involve a significant hazards consideration under the standards set forth in 10 CFR 50.92(c). Specifically, a proposed amendment to an operating license involves no significant hazards consideration if operation of the facility in accordance with the 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.

In support of this determination, an evaluation of each of the three criteria set forth in 10 CFR 50.92(c) is provided below regarding the proposed license amendment.

Criterion 1

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

Response: No

The proposed amendment revises TS 6.25 to replace the reference to RG 1.35 with a reference to Section XI, Subsection IWL of the ASME Boiler and Pressure Vessel Code, which is incorporated by reference in 10 CFR 50.55a, "Codes and Standards." The containment inservice inspection program for MPS2 complies with the requirements of 10 CFR 50.55a.

The proposed amendment provides consistency between the containment tendon surveillance program criteria in TS 6.25 and the regulatory requirements specified in 10 CFR 50.55a. These regulatory requirements and the associated surveillance program ensure that the pre-stressed concrete containment tendon system is capable of maintaining the structural integrity of the containment during operating and accident conditions. The pre-stressed concrete containment tendon system is not an initiator of any accident. Therefore, this change is not related to the probability of any accident previously evaluated.

The proposed amendment ensures that the tendon surveillance program requirement in TS 6.25 addresses the appropriate regulatory criteria. The improved inspections required by the ASME Code serve to maintain containment response to accident conditions, by causing the identification and repair of defects in the containment buildings.

This proposed amendment does not result in any reduction in the effectiveness of the existing surveillance program. The tendon surveillance program will continue to ensure that the containment structure is capable of performing its intended safety function in the event of a design basis accident. Therefore, this change has no effect on the consequences of an accident previously evaluated.

Criterion 2

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

Response: No

This proposed revision to TS 6.25 provides consistency between the containment tendon surveillance program criteria in TS 6.25 and the regulatory requirements specified in 10 CFR 50.55a. The proposed change does not result in any reduction in effectiveness of the existing containment tendon surveillance program. The containment tendon surveillance program will continue to satisfy the requirements of ASME Section XI, Subsection IWL, thus ensuring that the containment structure will perform its design safety function. This change does not introduce any new accident precursors and does not involve any alterations to plant configurations, which could initiate a new or different kind of accident. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

Criterion 3

Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No

This proposed revision to TS 6.25 provides consistency between the containment tendon surveillance program criteria in TS 6.25 and the regulatory requirements specified in 10 CFR 50.55a. The proposed TS change does not result in any reduction in effectiveness of the existing containment tendon surveillance program. The containment tendon surveillance program will continue to satisfy the requirements of ASME Section XI, Subsection IWL, thus ensuring that the containment structure will perform its design safety function in accordance with existing margins of safety for containment integrity. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Conclusion

Based upon evaluation of these criteria, DENC concludes that the proposed amendment presents no significant hazards under the standards set forth in 10 CFR 50.92(c) and, accordingly, a finding of "no significant hazards consideration" is justified.

4.3 Precedents

The proposed amendment is similar to changes previously approved by the NRC for Calvert Cliffs Units 1 and 2 (Reference 6.2), LaSalle Units 1 and 2 (Reference 6.3), Wolf Creek (Reference 6.4), Three Mile Island Unit 1 (Reference 6.5), and Vogtle Units 1 and 2 (Reference 6.6).

5.0 ENVIRONMENTAL CONSIDERATION

A review has determined that the proposed amendment 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 amendment does 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 amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

6.0 REFERENCES

6.1. Regulatory Guide 1.35, Inservice Inspection of Ungrouted Tendons in Prestressed Concrete Containments, Revision 3, July 1990.

6.2. Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2, Re: Containment Tendon Surveillance Program – Amendment (TAC Nos. MB0011 and MB0012), January 30, 2001 (ADAMS Accession No. ML003776835).

6.3. Lasalle County Station, Units 1 and 2 - Issuance of Amendments (TAC Nos. MB1769 and MB1770), August 16, 2001 (ADAMS Accession No. ML012060445).

6.4. Wolf Creek Generating Station - Issuance of Amendment Re: Containment Tendon Surveillance Program and Containment Leakage Rate Testing Program (TAC No. MC1068), March 17, 2004 (Adams Accession No. ML040820934).

6.5. Three Mile Island Nuclear Station, Unit 1, Re: Reactor Building Tendon Surveillance Criteria (TAC No. MC0361), July 13, 2004 (ADAMS Accession No. ML041660364).

6.6. Vogtle Electric Generating Plant, Units 1 and 2, Issuance of Amendments Regarding Tendon Surveillance Program (TAC Nos. MD1078 and MD1079), December 12, 2006 (ADAMS Accession No. ML062970484).

ATTACHMENT 2

MARK-UP OF TECHNICAL SPECIFICATION PAGE

DOMINION ENERGY NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION UNIT 2

~~March 5, 2013~~

ADMINISTRATIVE CONTROLS

6.24 DIESEL FUEL OIL TEST PROGRAM

A diesel fuel oil testing program to implement required testing of both new fuel oil and stored fuel oil shall be established. The program shall include sampling and testing requirements, and acceptance criteria, all in accordance with applicable ASTM Standards. The purpose of the program is to establish the following:

a. Acceptability of new fuel oil for use prior to addition to storage tanks by determining that the fuel oil has:

   1. An API gravity or an absolute specific gravity within limits,

   2. A flash point and kinematic viscosity within limits for ASTM 2D fuel oil, and

   3. A clear and bright appearance with proper color or a water and sediment content within limits.

b. Within 31 days following addition of the new fuel oil to storage tanks, verify that the properties of the new fuel oil, other than those addressed in a., above, are within limits for ASTM 2D fuel oil, and

c. Total particulate concentration of the fuel oil is ≤ 10 mg/L when tested every 92 days.

The provisions of Surveillance Requirements 4.0.2 and 4.0.3 are applicable to the Diesel Fuel Oil Test Program test frequencies.

6.25 PRE-STRESSED CONCRETE CONTAINMENT TENDON SURVEILLANCE PROGRAM

This program provides controls for monitoring any tendon degradation in pre-stressed concrete containments, including effectiveness of its corrosion protection medium, to ensure containment structural integrity. The program shall include baseline measurements prior to initial operations. The Tendon Surveillance Program, inspection frequencies, and acceptance criteria shall be in accordance with ~~Regulatory Guide 1.35, Revision 3, 1989~~ Section XI, Subsection IWL of the ASME Boiler and Pressure Vessel Code and applicable addenda as required by 10 CFR 50.55a, except where an exemption or relief has been authorized by the NRC.

The provisions of Surveillance Requirements ~~4.0.2 and~~ 4.0.3 are applicable to the Tendon Surveillance Program inspection frequencies.

Any abnormal degradation of the containment structure detected during the tests required by the Pre-stressed Concrete Containment Tendon Surveillance Program shall be reported to the NRC within 30 days. The report shall include a description of the tendon condition, the condition of the concrete (especially at tendon anchorages), the inspection procedures, the tolerances on cracking, and the corrective action taken. This Tendon Surveillance Report is an administrative requirement listed in Technical Specifications 6.9.2, "Special Reports."