Dominion Nuclear Connecticut, Inc.
5000 Dominion Boulevard, Glen Allen, VA 23060
Web Address: www.dom.com

October 2, 2013

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

Serial No. 13-525
NSSL/MLC R0
Docket No. 50-423
License No. NPF-49

DOMINION NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION UNIT 3
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION REGARDING LICENSE AMENDMENT REQUEST FOR CHANGES TO TECHNICAL SPECIFICATION 3/4.7.5, "ULTIMATE HEAT SINK"

By letter dated May 3, 2013, Dominion Nuclear Connecticut, Inc. (DNC) submitted a license amendment request (LAR) for Millstone Power Station Unit 3 (MPS3). The proposed amendment would modify Technical Specification (TS) 3/4.7.5, "Ultimate Heat Sink," to increase the current ultimate heat sink (UHS) water temperature limit from 75°F to 80°F and change the TS Action to state, "With the ultimate heat sink water temperature greater than 80°F, be in HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours."

In a letter dated June 26, 2013, the Nuclear Regulatory Commission (NRC) provided DNC an opportunity to supplement the LAR identified above. Supplemental information was provided to the NRC in a letter dated July 2, 2013. In an e-mail dated September 5, 2013, the NRC transmitted a request for additional information (RAI) related to the LAR. Attachment 1 to this letter contains DNC's response to the RAI.

If you have any questions or require additional information, please contact Wanda Craft at (804) 273-4687.

Sincerely,

Mark D. Sartain
Vice President – Nuclear Engineering and Development

VICKI L. HULL
Notary Public
Commonwealth of Virginia
140542
My Commission Expires May 31, 2014

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 Development of Dominion 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 2nd day of October, 2013.

My Commission Expires: 5-31-14.

Vicki L. Hull
Notary Public

A001
NRR

Commitments made in this letter: None

Attachment:

1. Response to Request for Additional Information Regarding License Amendment Request for Changes to Technical Specification 3/4.7.5, "Ultimate Heat Sink"

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

James S. Kim
Project Manager
U.S. Nuclear Regulatory Commission
One White Flint North, Mail Stop 08 C2A
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

Response to Request for Additional Information Regarding License Amendment Request for Changes to Technical Specification 3/4.7.5, "Ultimate Heat Sink"

Dominion Nuclear Connecticut, Inc.
Millstone Power Station Unit 3

Response to Request for Additional Information Regarding License Amendment Request for Changes to Technical Specification 3/4.7.5, "Ultimate Heat Sink"

By letter dated May 3, 2013, Dominion Nuclear Connecticut, Inc. (DNC) submitted a license amendment request (LAR) for Millstone Power Station Unit 3 (MPS3). The proposed amendment would modify Technical Specification (TS) 3/4.7.5, "Ultimate Heat Sink," to increase the current ultimate heat sink (UHS) water temperature limit from 75°F to 80°F and change the TS Action to state, "With the ultimate heat sink water temperature greater than 80°F, be in HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours."

In a letter dated June 26, 2013, the Nuclear Regulatory Commission (NRC) provided DNC an opportunity to supplement the LAR identified above. Supplemental information was provided to the NRC in a letter dated July 2, 2013. In an e-mail dated September 5, 2013, the NRC transmitted a request for additional information (RAI) related to the LAR. The response to this RAI is as follows:

SCVB-RAI-1

Reference 1, Attachment 1, Section 5.11, states:

"The reconciliation of other aspects of the revised containment pressure and temperature analyses has been implemented under 10CFR50.59.

(a) Please list and describe the "other aspects of containment pressure and temperature analysis" implemented under 10 CFR 50.59.

DNC Response

Section 5.11 is referring to MPS3 Loss of Coolant Accident (LOCA) containment analyses performed using corrected Nuclear Steam Supply System (NSSS) vendor mass and energy (M&E) release data. New containment analyses were performed as a result of errors in the vendor analysis for the LOCA blowdown, refill and reflood M&E releases. The LOCA containment analyses continue to meet the design limits. However, the peak calculated containment internal pressure for the design basis LOCA, defined as P_a in MPS3 Technical Specification 6.8.4.f, "Containment Leakage Rate Testing Program," increased from 41.4 to 41.9 psig. This change requires Nuclear Regulatory Commission (NRC) review and approval. In a license amendment request (LAR) dated April 25, 2013, DNC requested NRC review and approval of a change to the value of P_a from 41.4 to 41.9 psig in Technical Specification 6.8.4.f. The statement referenced above in the NRC question refers to the other aspects of the LOCA containment response analyses rather than the change to P_a. The other containment analyses were implemented under the provisions of 10 CFR 50.59. The containment analysis acceptance criteria of interest are described below.

1) Quench Spray and Recirculation Spray Piping

The time dependent response of containment atmosphere pressure and temperature, as well as the time dependent temperatures of the containment liner and selected nodes of the quench spray system (QSS) and recirculation spray system (RSS) piping, are calculated using the NRC-approved Dominion GOTHIC containment analysis methodology (topical report DOM-NAF-3-0.0-P-A). Transient response was generated for both small break LOCA and large break LOCA scenarios and used as an input to a structural analysis of QSS/RSS piping and piping supports.

DNC performed large break LOCA containment response analyses that incorporate the identified LOCA M&E analysis errors, evaluated the QSS/RSS piping temperature transients, and verified the results as acceptable.

2) Environmental Qualification Envelopes

The time dependent response of containment atmosphere pressure and temperature are calculated using the Dominion GOTHIC containment analysis methodology. This transient response is used as an input to Equipment Environmental Qualification (EEQ) evaluations.

DNC performed large break LOCA containment response analyses that incorporate the identified LOCA M&E analysis errors and performed EEQ evaluations. The evaluations demonstrated that EEQ program limits were satisfied.

3) Sump Temperature and Net Positive Suction Head

A Dominion GOTHIC containment calculation determines the maximum temperature of the fluid in the containment sump during a LOCA. This fluid temperature is confirmed to be bounded by the assumptions used in the stress analysis of the RSS piping, for verification that the sump fluid does not flash in the recirculation piping, and for verification of sufficient Net Positive Suction Head (NPSH) available so that cavitation does not occur at the RSS and emergency core cooling system (ECCS) pump impellers.

The containment maximum sump temperature analysis was revised with inputs that incorporated the identified LOCA M&E analysis errors. The revised analysis confirmed that the assumed sump temperatures used in the above design calculations continue to be bounded by the temperatures calculated by the Dominion GOTHIC containment maximum sump temperature analysis.

4) Evaluation of Containment Leakage Rate Testing Program

The most recent containment integrated leak rate testing was performed at a test pressure that bounded the increased value of P_a (i.e., 41.9 psig). The containment response validated the assumptions made for both the onsite and offsite radiological consequences of a LOCA. Details on the containment leakage rate test program are provided in the April 25, 2013 MPS3 LAR for the change to the value of P_a in Technical Specification 6.8.4.f.

SCVB-RAI-2

Please confirm that in the 10 CFR 50.59 changes implemented, the requirements of General Design Criterion (GDC) 16, 38, and 50 of 10 CFR 50 Appendix A are met.

DNC Response

The recent LOCA containment analyses to correct NSSS vendor M&E release errors, implemented under the provisions of 10 CFR 50.59, meet the requirements of General Design Criterion (GDC) 16, 38, and 50 of 10 CFR 50 Appendix A.