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July 27, 2015

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

Serial No. 15-344
NLOS/WDC R0
Docket No. 50-423
License No. NPF-49

DOMINION NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION UNIT 3
RESPONSE TO THIRD REQUEST FOR ADDITIONAL INFORMATION REGARDING
LICENSE AMENDMENT REQUEST FOR IMPLEMENTATION OF WCAP-14333 AND
WCAP-15376, REACTOR TRIP SYSTEM INSTRUMENTATION AND ENGINEERED
SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TEST TIMES AND
COMPLETION TIMES (TAC NO. MF4131)

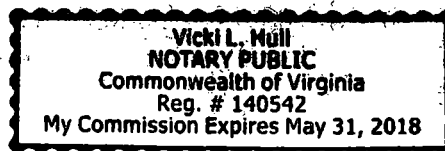
By letter dated May 8, 2014 and supplemented by a letter dated August 14, 2014, Dominion Nuclear Connecticut, Inc. (DNC) submitted a license amendment request (LAR) for Millstone Power Station Unit 3 (MPS3). The proposed amendment would revise TS 3/4.3.1, "Reactor Trip System Instrumentation," and TS 3/4.3.2, "Engineered Safety Feature Actuation System Instrumentation." These proposed changes are based on Westinghouse Electric Company LLC topical reports WCAP-14333-P-A, Revision 1, "Probabilistic Risk Analysis of the RPS and ESFAS Test Times and Completion Times," and WCAP-15376-P-A, Revision 1, "Risk-Informed Assessment of the RTS and ESFAS Surveillance Test Intervals and Reactor Trip Breaker Test and Completion Times." In an email dated September 22, 2014, the Nuclear Regulatory Commission (NRC) transmitted a request for additional information (RAI) to DNC related to the LAR. DNC responded to the RAI on October 15, 2014. In an email dated March 17, 2015, the NRC transmitted a second RAI. DNC responded to the RAI on May 18, 2015. In an email dated June 25, 2015, the NRC transmitted a third RAI as a follow up to the responses in the May 18, 2015 response letter.

The attachment to this letter provides DNC's response to the NRC's third RAI.

If you have any questions regarding this submittal, please contact Wanda Craft at (804) 273-4687.

Sincerely,

Mark D. Sartain
Vice President – Nuclear Engineering



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 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 27TH day of July, 2015.

My Commission Expires: 5-31-18

Notary Public

ADD!
NRR

Commitments made in this letter: None

Attachment:

Response to Third Request for Additional Information Regarding License Amendment Request for Implementation of WCAP-14333 and WCAP-15376, Reactor Trip System Instrumentation and Engineered Safety Feature Actuation System Instrumentation Test Times and Completion Times

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ATTACHMENT

**RESPONSE TO THIRD REQUEST FOR ADDITIONAL INFORMATION
REGARDING LICENSE AMENDMENT REQUEST FOR IMPLEMENTATION OF
WCAP-14333 AND WCAP-15376, REACTOR TRIP SYSTEM
INSTRUMENTATION AND ENGINEERED SAFETY FEATURE ACTUATION
SYSTEM INSTRUMENTATION TEST TIMES AND COMPLETION TIMES**

**DOMINION NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION UNIT 3**

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RAI 1.1 (follow up to PRA RAI 1)

The response to PRA RAI 1 states that: "These statements do not apply to the Tier 2 restrictions listed in Attachment 4 of the LAR," in reference to Tier 2 restrictions on pages 15 and 17 of the LAR. Please explain this statement.

DNC Response

The statement was meant to convey that the Tier 2 restrictions listed in Attachment 4 of the LAR apply when a logic train or reactor trip breaker is tested in bypass.

The wording of the Tier 2 restrictions listed in Attachment 4 of the LAR was revised and continues to apply when a logic train or reactor trip breaker are tested in bypass. See the response to RAI 4 in the May 18, 2015 response letter for the revised wording.

RAI 5.1 (follow up to PRA RAI 5)

PRA RAI 5 is based on information in the LAR Section 4.2.1, "WCAP-14333 Tier 2 Restrictions," rather than WCAP-15376. The LAR states that there are no Tier 2 limitations when a slave relay, master relay, or analog channel is inoperable. This conclusion appears to be based on information provided in Tables Q11.1 and Q18.1 from a letter dated December 20, 1996, transmitting a response to a request for additional information regarding WCAP-14333. Please explain how this Tier 2 conclusion was reached and whether the information in these tables, which includes an assessment of master or slave relay maintenance in Q18.1, was considered.

DNC Response

LAR Section 4.2.1 is a discussion of the Westinghouse evaluation of Tier 2 restrictions. DNC considered the information from the Westinghouse evaluation as documented in Tables Q11.1 and Q18.1 when determining Tier 2 restrictions. The Westinghouse evaluation determined the system importances individually for plant configurations with no ongoing test and maintenance activities and for plant configurations with ongoing test or maintenance activities on the analog channels, master relays, slave relays, and logic trains. The importances were compared between the cases with individual components unavailable and all components available. With respect to the analog channels, master relays and slave relays, the Westinghouse evaluation determined the importance rankings among the affected systems did not change. That is the basis for the statement there are no Tier 2 restrictions when a slave relay, master relay or analog channel is inoperable.

RAI 6.1 (follow up to PRA RAI 6)

The licensee's response to PRA RAI 6 describes the process to determine if Tier 2 or Tier 3 compensatory measures are needed for the LAR proposed changes with respect to fire-related risk. The process, according to the response, incorporates qualitative insights based on fire mitigation strategy as follows:

- Identify components that, when removed from service, render the unit with no core damage mitigation success paths*
- Remove those components that are Technical Specification limited (i.e., have an allowed outage time (AOT) ≤ 72 hours) AND require transitioning to mode 5*

The response appears to "or" these conditions together in that for components that meet either criterion, Technical Requirements Manual actions are established when a fire risk significant component is removed from service for greater than 72 hours. The second condition related to removing components that are Technical Specification (TS) limited does not consider potential risk significance. Based on the RAI response, it appears some components may not be qualitatively (or quantitatively) considered for Tier 2 or Tier 3 during the proposed TS bypass times or completion times which are ≤ 72 hours. Therefore, describe an acceptable Tier 2 and Tier 3 process with respect to fire-related risk and the results of the Tier 2 assessment.

DNC Response

The Tier 2 and Tier 3 process with respect to fire-related risk and the results of the Tier 2 assessment is provided below. DNC used the guidance provided in NUMARC 93-01, Revision 4A Section 11.3.4.3 when assessing fire risk within the 10 CFR 50.65(a)(4)

process. As a result of the clarification call associated with this RAI, a subset of the criteria used to identify fire risk significant components within (a)(4) was applied to the equipment considered in the LAR. The criteria are:

1. Incorporate quantitative PRA insights
 - Identify the components corresponding to random failure and test/maintenance basic events with internal events core damage frequency risk achievement worth (CDF RAW) > 2.0.
 - Remove those components not listed on the Safe Shutdown Equipment List (SSEL).
2. Incorporate qualitative insights based on fire mitigation strategy
 - Identify components that, when removed from service, render the unit with no core damage mitigating success paths.

The reactor protection system (RPS) components affected by the proposed amendment are not fire risk significant and thus, any fire risk incurred would be due to the additional equipment removed from service.

Based on the fire risk significant criteria listed above, components only meeting criterion 1 are less risk significant than components meeting criterion 2 since redundant equipment would be available to mitigate fire scenarios when criterion 1-only components are out of service. Furthermore, the risk of these configurations is adequately managed by Technical Requirements Manual (TRM) risk management actions. As a result, criterion 1-only components do not warrant additional Tier 2 or Tier 3 compensatory measures.

Alternatively, criterion 2 components provide the only available core damage mitigation success path for certain fire scenarios and therefore, have high fire risk significance due to the lack of redundancy. Consequently, components meeting criterion 2 are deemed reasonable candidates for developing a Tier 2 or Tier 3 compensatory measure.

The turbine driven AFW pump is the only component that meets criterion 2 and has already been included in the proposed Tier 2 restrictions (i.e., AFW system components will not be removed from service when a reactor trip breaker is inoperable for maintenance). As a result, no additional Tier 2 or Tier 3 compensatory measures are recommended.

RAI 12.1 (follow up to PRA RAI 12)

The LAR Table 1 provides a comparison between WCAP-14333 analysis assumptions and plant-specific parameters. PRA RAI 12 requested an explanation whether the WCAP-14333 Tier 1 analysis remained bounding for these plant-specific values. The response to PRA RAI 12 states that the plant-specific values for MPS3 shown in Table

1 of Attachment 3 of the LAR are consistent with those of Vogtle Electric Generating Plant (Vogtle) as shown on Table 1 on page 297 (Enclosure 5, page E5-2) of WCAP-14333-P-A, Revision 1, Supplement 1, dated September 2003. However, a review of TSTF-418 shows that this reference is dated after the NRC staff's approval letter of TSTF-418 (ADAMS Accession No. ML030920633). Therefore, the referenced document does not appear to have been part of the NRC staff's review of TSTF-418, nor does it appear to be provided as a reference supporting the proposed TS changes in the LAR. Please provide an explanation as requested in PRA RAI 12, consistent with the TSTF-418 traveler which the LAR is requesting to adopt.

DNC Response

Given that less testing/maintenance is being performed on some slave relays and the reactor trip breakers, the unavailability of these components will be less than that assumed in the WCAP. Since the MPS3 unavailability values are less than those used in the WCAP, MPS3 is bounded by the WCAP risk analysis.