



June 5, 2015

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

Serial No. 15-246
NLOS/WDC R0
Docket No. 50-336
License No. DPR-65

DOMINION NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION UNIT 2
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION REGARDING
RELOCATION OF SPECIFIC SURVEILLANCE FREQUENCY REQUIREMENTS TO
A LICENSEE CONTROLLED PROGRAM (TAC NO. MF5096)

By letter dated October 22, 2014, Dominion Nuclear Connecticut, Inc. (DNC) submitted a license amendment request (LAR) for Millstone Power Station Unit 2 (MPS2). The proposed amendment would relocate certain technical specification (TS) surveillance frequencies to a licensee controlled program by adopting Technical Specification Task Force (TSTF) -425, Revision 3, "Relocate Surveillance Frequencies to Licensee Control – RITSTF [Risk-Informed Technical Specification Task Force] Initiative 5b." The proposed change would also add a new program, the Surveillance Frequency Control Program, in accordance with TSTF-425. In an email dated May 6, 2015, the Nuclear Regulatory Commission (NRC) transmitted a request for additional information (RAI) related to the LAR. DNC agreed to respond to the RAI by June 5, 2015.

Attachment 1 provides DNC's response to the NRC's RAIs.

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

Sincerely,

Daniel G. Stoddard
Senior Vice President – Nuclear Operations

COMMONWEALTH OF VIRGINIA)

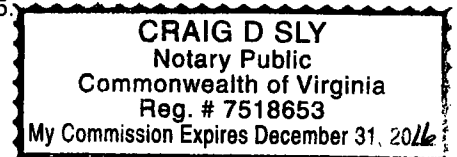
COUNTY OF HENRICO)

The foregoing document was acknowledged before me, in and for the County and State aforesaid, today by Daniel G. Stoddard, who is Senior Vice President – Nuclear Operations 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 5th day of June, 2015.

My Commission Expires: 12/31/16

Notary Public



A001
L1R

Attachment:

1. Response to Request for Additional Information Regarding Relocation of Specific Surveillance Frequency Requirements to a Licensee Controlled Program

Commitments made in this letter: None

cc: U.S. Nuclear Regulatory Commission
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ATTACHMENT

**RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION REGARDING
RELOCATION OF SPECIFIC SURVEILLANCE FREQUENCY REQUIREMENTS TO A
LICENSEE CONTROLLED PROGRAM**

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DOMINION NUCLEAR CONNECTICUT, INC.**

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RAI 1

In Gap #1, from the 2000 peer review, related to Supporting Requirements (SRs) AS-10 and sub-element AS-18, the peer review team noticed that there was no modeling of makeup to the condenser when the steam dump valves fail. The licensee dispositioned the finding by performing a sensitivity study that added the steam dump valves as a required support system for the Main Feed Water function until the F&O can be resolved. However, the F&O has been considered unresolved since 2000 with a sensitivity study. The licensee stated in the submittal that they update their PRA model every three to five years. If that is the case, Gap #1 should have a resolution/disposition in place and be closed out per the update process.

Explain how this work will be completed before implementation of the TSTF-425 program.

DNC Response

The steam dump valve function to provide makeup to the condenser is a non-risk significant function due to redundancy and diversity in the RCS cooling function. In addition, the success criterion for steam generator cooling via the steam dump valves only requires one of the four valves.

The steam dump valve support function for makeup to the condenser has not been included in the MPS2 PRA model updates since it is non-risk significant and has minimal impact on the model results. Dominion will resolve this gap in the next MPS2 PRA model update, which is not planned prior to the implementation of the TSTF-425 program. However, in accordance with NEI 04-10, until this modeling gap is resolved, a sensitivity study will be performed by adding the steam dump valves as a required support system for makeup to the condenser.

RAI 2

In Gap #2, from the self-assessment, related to SR IE-A8, the self-assessment team noted that the interview with plant personnel for potential initiating events has been

overlooked by the licensee. In Gap #6, from the self-assessment, related to SRs SY-A4 and SY-C2, the self-assessment team referenced the Individual Plant Examination documentation and interviews with PRA engineers as evidence that the tasks in SY-A4 were completed, but there was no documentation supporting this work. The licensee stated that they conducted interviews with system engineers but would need to conduct interviews with operations personnel and perform walkdowns, in accordance with their procedure, before resolving this documentation F&O. The licensee further stated that these SRs will remain unmet until they perform interviews with the operation personnel, in accordance with their PRA procedure. The ASME/ANS PRA Standard requires the licensee to interview plant personnel (e.g. operation, maintenance, engineering, safety analysis) to determine if potential initiating events have been overlooked (Gap #2) and that the licensee perform interviews and walkdowns (Gap #6). The SRs cited are not related to documentation except SY-C2, which was also considered unmet.

Provide justification that the interviews with operations personnel have been conducted or that the system personnel interviewed possessed equivalent knowledge of operations personnel (e.g., former reactor operators, shift technical advisors, etc.) such that there is no impact on the initiating events and the PRA model represents the as-built, as-operated plant.

DNC Response

An interview between PRA staff and a former MPS2 Operations shift manager was conducted recently to determine if the current MPS2 PRA model overlooked potential initiating events. The interview concluded that no additional initiating events need to be included in the PRA model. This satisfies the requirements of SR IE-A8 and resolves Gap #2.

To address Gap #6, a process has been developed and implemented to document information on plant walkdowns and discussions with plant personnel. Documentation of plant walkdowns and interviews are now maintained in the PRA system notebooks. Plant walkdowns and interviews with knowledgeable plant personnel are conducted as described in GARD NF-AA-PRA-101-2040, *Systems Analysis and Fault Tree Model Development*.

System engineer interviews have been completed and documented for the PRA modeled systems to confirm the PRA model correctly reflects the as-built, as-operated plant. The feedback from the interviews was primarily editorial and did not have a significant impact on the model. System walkdowns have also been completed. The system walkdowns did not identify any modeling issues.

RAI 3

In Gap #4, from the self-assessment, related to SR AS-A10, the self-assessment team stated that the licensee did not explain how the differences in system requirements for each initiating event impacted operator actions or system responses. The licensee stated that this F&O is a documentation issue and will not have any impact to the program. The licensee further stated that they will address this as a part of F&O HR-G4-01 (Gap #9) and will remain open until HR-G4-01 is closed. The relationship between Gap #9 and Gap #4 needs clarification as Gap #9 appears to be a HEP timing issue whereas Gap #4 appears to be differences in system requirements for each initiating event that will impact operator actions and system response. The NRC staff notes that, since the cited SR is not part of the documentation HLR, it does not appear to be solely a documentation issue, but requires specific action to be met.

Explain how the licensee plans to resolve this F&O and its impact to the TSTF-425 program. If the resolution to the HEP timing issue in HR-G4-01 applies, then the licensee should explain how the resolution to HR-G4-01 applies to Gap #4 and the impact on the application.

DNC Response

Gap #4, the impact on operator actions or system responses due to differences in system requirements for each initiating event, has been adequately assessed in the MPS2 PRA model, but this process has not been adequately explained in the model documentation. Since this is only a documentation issue, it has no impact on the TSTF-425 program. This SR will remain open until the differences in system requirements for each initiating event impacting operator actions or system responses are sufficiently documented. Dominion will resolve this gap in the next model update.

There is no direct relationship between Gaps #4 and #9. Gap #4 is related to system requirements for initiating events impacting operator actions and system responses and Gap #9 is related to HEP timing. The gaps are independent, but for efficiency they were linked because both are related to the overall Human Reliability Analysis (HRA). A single analysis of HRA is planned for the next model update to resolve multiple gaps.

RAI 4

In Gap #9, from the Focused Scope Peer Review, related to SR HR-G4, the peer review team noted that the HEP timing information for HRA event OAADV1 showed two different times associated with the event (30 minutes for General Transient and 11 minutes for Loss of Main Feedwater). The peer review team further stated that the licensee should use 11 minutes since it is limiting and that 30 minutes may be non-conservative. The licensee will keep this F&O open until the issue is addressed and then they plan to perform a sensitivity study with a combination of corrected HEPs. The licensee identified this F&O as risk-significant.

If this gap is risk-significant and important for the application, the F&O should be addressed before implementing the program. Discuss how this will be addressed.

DNC Response

Recent evaluation of the MPS2 PRA model revealed that OAADV1 (Operators Fail Local Manual Operation of an atmospheric dump valve (ADV)) is correctly modeled in response to general transients (30 minutes). The MPS2 PRA model does not credit operators locally operating the ADV during a loss of main feedwater event (11 minutes) since there is insufficient time to locally perform the action. Thus, HRA event OAADV1 is correctly modeled.

An extent of condition review was also recently performed to ensure the modeled operator actions correctly reflect the associated accident scenarios. Two additional HEPs were identified, each with a different time window based on the accident scenario. These HEPs are OABYPASS (Operators Fail to Open Auxiliary Feedwater Regulating Bypass Valves) and OAP41B (Operators Fail to Align High Pressure Safety Injection B Swing Pump). Both HEPs are non risk-significant and will be corrected through a sensitivity study in accordance with NEI 04-10 using revised HEPs.

RAI 5

In Gap #8, from the Focused Scope Peer Review, related to SR HR-G3, the peer review team noted that the HRA calculator worksheets were identified as not being properly filled out (i.e. dependency factors and sigma). The licensee will keep this F&O open until correct the new HRA calculations are included in the model. They also plan to correct the HRA Calculator entries for dependency factor and sigma and then they plan to perform a sensitivity study with a combination of corrected HEPs. The licensee identified this F&O as risk-significant.

If this gap is risk-significant and important for the application, the F&O should be addressed before implementing the program. Discuss how this will be addressed.

DNC Response

The MPS2 HRA Calculator entries have been revised to address Gap #8 by incorporating the correct dependency factors and sigma values for each of the affected HEPs. Quantification of the MPS2 PRA model with the revised HEPs, including both independent and dependent failure probabilities, resulted in a low risk-significant impact (i.e., less than 1% change in core damage frequency (CDF) and large early release frequency (LERF) values). Since this modeling gap is now considered low risk-significant, the gap will be addressed through a sensitivity study in accordance with NEI

04-10 by using the correct dependency factor and sigma values for each of the affected HEPs.

RAI 6

In Gap #11, from the Focused Scope Peer Review, related to SR LE-F1, the peer review team found that the licensee did not provide a quantitative evaluation and identification of the dominant LERF contributors to LERF by plant damage states. The licensee stated the dominant LERF contributors to LERF need to be presented by plant damage states, which requires enhancements to the CAFTA LERF model, but will not have an impact to the LERF results. The licensee goes on to state that this is a documentation issue and will only provide another way for the licensee to present the results. Capability Category II of this SR requires that the licensee perform the evaluation of the relative contribution to LERF from plant damage states and significant LERF contributors from Table 2-2.8-9.

Both Capability Category I and Capability Category II require consideration of significant LERF contributors. Therefore confirm that the LERF model has considered the significant contribution from Table 2-2.8-9.

DNC Response

The evaluated, reviewed and documented MPS2 LERF results included LERF contributors by accident progression sequences, initiating events and containment failure modes. The MPS2 LERF model evaluated the significant LERF contributors from Table 2-2.8-9 in ASME/ANS RA-Sa-2009. The significant LERF contributors considered in the MPS2 LERF model are containment isolation failure, containment bypass, high pressure melt ejection, core debris impingement, and in-vessel recovery. High pressure melt ejection and core debris impingement were screened out in the LERF analysis as non-contributors. Also, no credit was taken for in-vessel recovery preventing large early release.

RAI 7

In Gap #14, from the Focused Scope Peer Review, related to SR IFSN-A8, the peer review team found that the licensee did not identify inter-area flood propagation through areas connected via backflow through drain lines involving failed check valves and hatchways, explicitly require by the ASME/ANS PRA Standard. The licensee stated that they would perform a sensitivity study to those two pathways if new propagation or flood pathways were identified.

Since propagation pathways are potentially risk significant, resolve the F&O for the application of the program, or provide justification that the resolution of the F&O is not important for this program.

DNC Response

In accordance with ASME/ANS Standard Supporting Requirement IFSN-A8, an investigation was conducted to identify inter-area flood propagation between areas connected via backflow through drain lines involving failed check valves and hatchways. This investigation is documented in a PRA Notebook and concludes that the inter-area propagation scenarios are bounded by currently modeled internal flood scenarios. This satisfies the requirements of IFSN-A8 and resolves Gap #14.