



March 9, 2020

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
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Serial No.: 20-055
NRA/GDM R2
Docket Nos.: 50-336/423
50-338/339
50-280/281
50-395
License Nos.: DPR-65
NPF-49
NPF-4/7
DPR-32/37
NPF-12

DOMINION ENERGY NUCLEAR CONNECTICUT, INC (DENC)
VIRGINIA ELECTRIC AND POWER COMPANY (DOMINION ENERGY VIRGINIA)
DOMINION ENERGY SOUTH CAROLINA, INC (DESC)
MILLSTONE POWER STATION (MPS) UNITS 2 AND 3
NORTH ANNA POWER STATION (NAPS) UNITS 1 AND 2
SURRY POWER STATION (SPS) UNITS 1 AND 2
VIRGIL C. SUMMER NUCLEAR STATION (VCSNS) UNIT 1
NRC BULLETIN 2012-01 DESIGN VULNERABILITY IN ELECTRIC POWER SYSTEM
REGULATORY COMMITMENT CHANGE TO REMAIN IN MONITORING VS.
PROTECTION MODE

By letter dated December 19, 2018 [ADAMS Accession No. ML18361A573], Dominion Energy Virginia and DENC committed to enabling the trip function for the Open Phase Isolation Systems (OPIS) at NAPS and SPS Units 1 and 2, and MPS Units 2 and 3, respectively, by December 31, 2020. By letter dated May 2, 2019 [ADAMS Accession No. ML19122A517], DESC committed to enabling the OPIS trip function at VCSNS Unit 1 by October 31, 2020.

On June 6, 2019, the Nuclear Energy Institute (NEI) issued Revision 3 of the voluntary industry initiative (VII), *Open Phase Condition Initiative*, which incorporated a Risk Informed Evaluation Method that could be used to demonstrate that operator manual actions would be sufficient to mitigate the impact of an open phase condition (OPC). NEI also issued Technical Report NEI 19-02, *Guidance for Assessing Open Phase Condition Implementation Using Risk Insights*, as a means of performing the risk evaluation allowed by Revision 3 of the VII. NEI 19-02 provides guidance for the performance of a risk assessment to inform the decision of whether to implement the OPIS automatic trip function or to implement the OPIS to provide alarm and indication to the control room operator and rely on operator action to diagnose and respond to the presence of an OPC.

After reviewing these two documents, Dominion Energy Virginia, DENC, and DESC (collectively, Dominion Energy) performed risk evaluations for NAPS and SPS Units 1 and 2, MPS Units 2 and 3, and VCSNS Unit 1, respectively, in accordance with the NEI 19-02 guidance. The risk evaluations were performed to determine whether the units met the risk acceptance criteria for maintaining their OPIS in detection (i.e., monitoring and control room indication) mode, with associated manual operator actions, to address an OPC, as opposed to enabling the automatic trip protection function. The risk evaluation performed for each station evaluated the risk of OPCs that could potentially impact various switchyard transformers and determined the risk benefit, if any, of operating the OPIS in protection (trip) mode versus detection (monitoring) mode. The completed risk evaluations for the Dominion Energy plants determined that the benefit of operating the OPIS in automatic (protection) mode is considered “very small” in accordance with Regulatory Guide 1.174. Therefore, operation of the OPIS in detection mode with alarmed operator response to an OPC is considered sufficient to mitigate the impact of an OPC.

Based on the completed risk evaluations discussed above, Dominion Energy is hereby revising its fleet NRC Bulletin 2012-01 commitments to place the respective plants’ non-safety-related OPIS in detection and indication mode as opposed to automatic trip mode. NAPS and SPS Units 1 and 2 have both non-safety-related and safety-related OPIS installed. Their safety-related OPIS will remain in automatic trip mode at this time; however, this decision may be reevaluated in the future regarding the use of a detection and indication solution. License amendment requests would be required should NAPS and/or SPS elect to remove the automatic trip function for their safety-related OPIS. The revised station commitments are summarized in the table below. Note that the previously provided OPIS completion commitment dates have not changed and are provided in the table below for completeness.

REVISED NRC BULLETIN 2012-01 COMMITMENTS			
Plant	Automatic Trip Mode (Yes/No)	Detection and Alarm Only Mode (Yes/No)	Completion Date
MPS Units 2 and 3	No	Yes	December 31, 2020
NAPS Units 1 and 2	Yes – Safety-related OPIS	Yes - Non-safety - related OPIS	December 31, 2020
SPS Units 1 and 2	Yes – Safety-related OPIS	Yes - Non-safety - related OPIS	December 31, 2020
VCSNS Unit 1	No	Yes	October 31, 2020

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