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Dominion®

November 6, 2017

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

Serial No. 17-425
NRA/WDC R0
Docket No. 50-423
License No. NPF-49

DOMINION NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION UNIT 3
EMERGENCY CORE COOLING SYSTEM (ECCS) MODEL CHANGE
PURSUANT TO THE REQUIREMENTS OF 10 CFR 50.46
SUBMITTAL SCHEDULE DATE CHANGE

By letter dated November 29, 2012 (Reference 1), Dominion Nuclear Connecticut, Inc. (DNC) submitted information regarding an evaluation of fuel pellet thermal conductivity degradation (TCD) with fuel burnup in the Westinghouse Best Estimate Large Break Loss of Coolant Accident (LBLOCA) analysis methodology for Millstone Power Station Unit 3 (MPS3) and its effect on peak cladding temperature (PCT). In the November 29, 2012 letter, DNC provided a plan to submit to the NRC for review and approval a LBLOCA analysis that applies NRC-approved methods that include the effects of fuel pellet TCD by November 30, 2017. The date was based on completion of two milestones that would allow development of a revised licensing basis LBLOCA analysis with an NRC-approved ECCS Evaluation Model (EM) that explicitly accounts for TCD. The two milestones are as follows:

1) NRC approval of a fuel performance analysis methodology that includes the effects of TCD. The new methodology would replace the current licensing basis methodology in WCAP-15063-P-A, Revision 1 (Reference 2), which is referenced in Section 4.2.3.3 of the MPS3 Final Safety Analysis Report (FSAR), to develop inputs to the LBLOCA EM.

2) NRC approval of a LBLOCA EM that includes the effects of TCD and accommodates the ongoing 10 CFR 50.46(c) rulemaking process. The new methodology would replace the current licensing basis analysis methodology in WCAP-16009-P-A (Reference 3), which is referenced in Section 15.6.5.2 of the MPS3 FSAR.

The LBLOCA analysis for MPS3 will use the Westinghouse FULL SPECTRUM™ LOCA (FSLOCA™) Evaluation Model with fuel rod inputs that explicitly account for fuel pellet TCD based on the Westinghouse PAD5 fuel performance code. The Westinghouse topical reports, intended to replace the current licensing basis LBLOCA and fuel performance analysis methodologies, were approved recently by the NRC. As a result of the delay in completing the milestones for the analysis methodologies, the November 30, 2017 date cannot be met. This letter revises the date for submittal of the LBLOCA

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analysis for MPS3 from November 30, 2017 to November 30, 2020. The schedule considers the overall plan for completing the MPS3 FSLOCA™ analysis.

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

Respectfully,

Mark D. Sartain
Vice President – Nuclear Engineering and Fleet Support
Dominion Energy Nuclear Connecticut, Inc.

Commitments made in this letter: None

References:

1. Letter from J. Alan Price (Dominion) to USNRC, "Dominion Nuclear Connecticut, Inc. (DNC), Millstone Power Station Unit 3, 30-Day Report of Emergency Core Cooling System (ECCS) Model Changes Pursuant to the Requirements of 10 CFR 50.46," Dominion Serial No. 12-705, November 29, 2012. (ADAMS Accession No. ML12340A010)

2. WCAP-15063-P-A, Revision 1 with Errata, "Westinghouse Improved Performance Analysis and Design Model (PAD 4.0)," July 2000.

3. WCAP-16009-P-A, "Realistic Large-Break LOCA Evaluation Methodology Using the Automated Statistical Treatment Of Uncertainty Method (ASTRUM)," January 2005.

cc: U. S. Nuclear Regulatory Commission
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