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U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
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NOV 07 2017

Serial No.	17-420
NSS&LWEB	R0
Docket No.	50-423
License No.	NPF-49

DOMINION NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION UNIT 3
30-DAY SPECIAL REPORT FOR AN RCS PRESSURE TRANSIENT

In accordance with the Millstone Power Station Unit 3 (MPS3) Technical Specifications (TSs), Section 3.4.9.3.f, Dominion Nuclear Connecticut, Inc., hereby submits this Special Report documenting conditions surrounding a Reactor Coolant System (RCS) pressure transient.

MPS3 TS 3.4.9.3.f requires a special report be submitted to the Nuclear Regulatory Commission (NRC) within 30 days in the event the Power Operated Relief Valves (PORVs), the Residual Heat Removal (RHR) suction relief valves, or the RCS vent are used to mitigate an RCS pressure transient. The report shall describe the circumstances initiating the transient, the effect of the PORVs, the RHR suction relief valves, or RCS vent on the transient, and any corrective actions necessary to preclude repetition. The 30 day Special Report for the RCS pressure transient event is contained in Attachment 1.

If you have any questions or require additional information, please contact Mr. Jeffry Langan at (860) 444-5544.

Sincerely,

J. R. Daugherty
Site Vice President – Millstone

Attachment
30-day Special Report – RCS Pressure Transient

Commitments made in this letter: None

IEZZ
NRR

cc: U.S. Nuclear Regulatory Commission
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ATTACHMENT

30-DAY SPECIAL REPORT

RCS PRESSURE TRANSIENT

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

30-DAY SPECIAL REPORT RCS PRESSURE TRANSIENT

In accordance with the Millstone Power Station Unit 3 (MPS3) Technical Specifications (TSs), Section 3.4.9.3.f, Dominion Nuclear Connecticut, Inc., hereby submits this 30 Day Special Report documenting conditions surrounding a Reactor Coolant System (RCS) pressure transient.

Event Details:

On October 13, 2017 at approximately 21:20 hours, with the plant in Mode 5, Cold Shutdown, and the RCS at a temperature of 169 degrees F, an unplanned RCS pressure transient occurred. To support an on-going modification, instrument air was isolated to a portion of the Auxiliary Building. This resulted in a loss of air to the positioner for charging flow control valve 3CHS*FCV121. This resulted in the charging flow control valve failing full open resulting in an unplanned increase in charging flow into the RCS. This event occurred while the RCS was in a water solid condition. The increase in charging flow resulted in a rapid rise in RCS pressure. Over the course of approximately 18 seconds, the RCS wide range indicated pressure increased from an initial pressure of approximately 350 pounds per square inch absolute (psia) to a peak pressure of approximately 472 psia before returning to its previous value. The peak pressure of 472 psia exceeded the Technical Specification Pressure/Temperature limit of 435 psia. The Residual Heat Removal (RHR) System suction relief valves opened as designed to mitigate the pressure increase.

Control Room operators observed the charging flow control valve failing open and directed instrument air to be restored. This restored control of the charging flow control valve to the control room. RCS pressure was restored to below the TS limit. This event was entered into Millstone Power Station's (MPS's) Corrective Action Program (CAP) (CR1080842, RCS Overpressure Event Due to 3CHS*FCV121 Failing Open.)

Engineering performed an evaluation of the pressure transient to determine if 10CFR50, Appendix G or ASME XI, Appendix G limits were exceeded. At 169 degrees F, the 10CFR50, Appendix G limit is bounding. This limits pressure at the reactor vessel beltline to 20% of the preservice hydrostatic test pressure, or 625 psia. The wide range pressure of 472 psia corresponds to a pressure at the reactor vessel beltline of 498.7 psia when corrected for instrument uncertainty and dynamic pressure differential between the reactor vessel downcomer region and the wide range pressure transmitter for one reactor coolant pump running. Therefore, the 10CFR50, Appendix G limit was not exceeded and structural integrity remains intact.

Corrective Actions to Preclude Repetition:

Plant procedures are being revised to implement Infrequently Conducted or Complex Evolutions (ICCE) controls during water solid plant operations and linked to new procedure OP 3211 (Solid Plant Pressure Control (ICCE)).