



January 17, 2007

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

Serial No. 06-315B
NSS&L/DF R0
Docket No. 50-423
License No. NPF-49

DOMINION NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION UNIT 3
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
INTEGRATED LEAKAGE RATE TEST INTERVAL

In a letter dated June 14, 2006, Dominion Nuclear Connecticut, Inc. (DNC) submitted a request to extend the test interval for the integrated leakage rate test for Millstone Power Station Unit 3 (MPS3). In an e-mail dated December 6, 2006, the NRC staff requested additional information (RAI) in order to complete its review of DNC's request. The request was further discussed in a conference call of December 13, 2006. The response to the RAI is provided in the attachment to this letter.

The additional information provided in this letter does not affect the conclusions of the significant hazards consideration discussion in the DNC letter dated March 28, 2006.

If you have any questions in regard to the responses provided, or require additional information, please contact Mr. Paul R. Willoughby at (804) 273-3572.

Very truly yours,

A handwritten signature in black ink, appearing to read "Gerald T. Bischof".

Gerald T. Bischof
Vice President – Nuclear Engineering

Commitments in this letter: None

Attachments: (1)

cc: U.S. Nuclear Regulatory Commission
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ATTACHMENT

INTEGRATED LEAKAGE RATE TEST INTERVAL
LICENSE AMENDMENT REQUEST
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

DOMINION NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION UNIT 3

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
INTEGRATED LEAKAGE RATE TEST INTERVAL
LICENSE AMENDMENT REQUEST

In a letter dated June 14, 2006, Dominion Nuclear Connecticut, Inc. (DNC) submitted a request to extend the test interval for the integrated leakage rate test for Millstone Power Station Unit 3 (MPS3). In an e-mail dated December 6, 2006, the NRC staff forwarded a request for additional information (RAI) to support completion of its review of DNC's request. The response to the RAI is provided in the balance of this attachment.

NRC Question No. 1.

The population dose for the intact containment accident class (1.65E4 person-rem per event) still seems very high. The source terms for this accident class reported in the license renewal Environmental Report (2.8E-3 nobles, 7.9E-6 I, 7.7E-6 Cs, and 3E-5 others) are small, and would not appear to result in such a large population dose. Based on use of the high population dose estimates, the requested ILRT extension would result in an increase in population dose of 0.6 person-rem/yr, or 5%. More typical values (that [the NRC has] accepted) would be <0.1 person-rem/y and a fraction of a percent.

DNC Response

The population dose for the intact containment accident class has been re-calculated using a best estimate containment leak rate. The revised leak rate resulted in a reduction in the source term mass fractions released to the environment. As a result, the population dose for Class 1 accidents (no containment failure) at MPS3 is now 2.57E+3 person roentgen equivalent man (rem) per event. This results in a 15 year ILRT test frequency dose rate change of 0.1 person-rem/year. In addition, the MPS3 containment structure is housed within the containment enclosure building, which along with structures adjacent to the containment, forms the boundary of the supplementary leak collection and release system (SLRCS). The SLCRS establishes a subatmospheric pressure in the containment enclosure building and contiguous structures and provides additional filtration of any particulate source terms that leak through the primary containment wall. Although no credit has been taken for the SLCRS in this evaluation, this secondary containment filtration system would significantly reduce the source term and associated offsite consequences beyond that indicated above.

NRC Question No. 2.

[The NRC] asked for an estimate of the total LERF when external events and the impact of the requested change are included. The licensee simply repeated numbers from the license amendment request that represent the delta LERF rather than the total LERF.

DNC Response

The MPS3 current baseline large early release frequency (LERF) from internal events has been calculated to be $1.5E-7/yr$. The MPS3 baseline LERF from internal events changed from $3.17E-7/yr$ in the 2002 PRA update to $3.11E-7/yr$ in the 2004 PRA update to $1.5E-7/yr$ in the 2005 PRA update. The reduction in baseline LERF between the 2004 and 2005 PRA updates is due to changes in the internal events Level 1 PRA model. No changes were made to the Level 2 PRA model logic or plant damage state fractions. The changes in the Level 1 PRA model impacting the LERF were primarily due to a plant specific data update and reassessment of HVAC dependencies. The Level 1 core damage frequency changed from $1.5E-5/yr$ in the 2004 PRA model to $5.7E-6/yr$ in the 2005 PRA model.

No external events PRA models are available for MPS3, including the models used as the basis for the IPEEE analysis. However, total LERF including external events, can be estimated from the summary Level 2 PRA results in IPEEE submittal Tables 3.5-3 and 3.5-6. The frequency of IPEEE release categories that could potentially contribute to LERF (i.e., M1A, M1B, M2, M3, M4, M5, M6, & M8) was summed for the fire and seismic analysis. The results of these are summarized below:

Fire LERF = $9.96E-9/yr$

Seismic LERF = $6.58E-7/yr$

Total IPEEE external events LERF = $6.68E-7/yr$

Total internal and IPEEE external events LERF = $8.2E-7/yr$

Thus the estimated total LERF, including internal and IPEEE external events, is estimated to be $8.2E-7/yr$.