

September 29, 2006

MEMORANDUM TO: Brooke D. Poole, Acting Chief  
Plant Licensing Branch I-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

FROM: Victor Nerses, Senior Project Manager **/RAI/**  
Plant Licensing Branch I-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

SUBJECT: MILLSTONE POWER STATION, UNIT NO. 3 - FACSIMILE  
TRANSMISSION, DRAFT REQUEST FOR ADDITIONAL INFORMATION  
REGARDING EXTENSION OF INTEGRATED LEAKAGE RATE TEST  
INTERVAL (TAC NO. MD2458)

The attached draft request for additional information (RAI) was transmitted on September 29, 2006, to Mr. Paul Willoughby, at Dominion Nuclear Connecticut, Inc. (DNC) by facsimile. This was done to support a telephone conversation to facilitate the review being conducted by the Nuclear Regulatory Commission (NRC) staff in order to clarify certain items in the licensee's submittal. The draft RAI is related to DNC's submittal dated June 14 2006, regarding a request to extend the test interval for the integrated leakage rate test. This memorandum and the attachment do not convey a formal request for information or represent an NRC staff position.

Docket No. 50-423

Enclosure:  
As stated

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DRAFT REQUEST FOR ADDITIONAL INFORMATION

MILLSTONE POWER STATION, UNIT 3

INTEGRATED LEAKAGE RATE TEST INTERVAL

DOCKET NO. 50-423

By 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 No. 3 (MPS3). The Nuclear Regulatory Commission staff requests the following additional information to complete its review.

1. The population dose for Class 1 accidents (no containment failure) at MPS3 ( $1.65E+4$  person roentgen equivalent man (rem) per event) is at the high end of the range of values reported for intact containment release classes in other studies, including Level 3 analyses submitted as part of recent license renewal applications. Population doses for accidents with an intact containment are typically on the order of 1000 person-rem per event. The impact of the proposed integrated leakage rate test (ILRT) extension on population dose could be substantially overstated as a result of this apparent, albeit conservative, bias in the dose estimate. Provide additional justification for the population dose estimate used for Class 1 accidents in the ILRT analysis in view of the aforementioned disparity.
2. The total large early release frequency (LERF) for MPS3 prior to the requested change is stated to be  $3.17E-7$  per year (page 20 of Attachment 2 to the June 14, 2006, request). However, this value does not include the contribution to LERF from external events. As stated in Section 2.2.4 of Regulatory Guide 1.174, the risk-acceptance guidelines (in this case, for LERF) are intended for comparison with a full-scope risk assessment, including internal and external events. Consistent with this guidance, and to the extent supportable by the available risk models for MPS3, provide an estimate of the total LERF when external events and the impact of the requested change are included within the assessment.
3. The discussion of conservatisms in the ILRT analysis (page 28 of Attachment 2 to the June 14, 2006, request) implies the existence of a more recent version of the MPS3 probabilistic risk assessment (PRA) than the October 2002 version on which the ILRT analysis is based. Describe the major differences between the October 2002 version and the updated version of the PRA, including changes to models and assumptions, and estimated results for core damage frequency and LERF. Provide an expanded discussion of the impact on  $\Delta$ LERF and total LERF if the ILRT analysis was based on the more recent PRA.
4. Section 4.4 of the submittal includes a brief description of the containment inservice inspection (ISI) program being implemented at MPS3. Please provide a schedule and description of the ISI methods used to provide assurance that, in the absence of a containment ILRT for 15 years, the containment structural and leak-tight integrity will be maintained.

5. The third paragraph of Section 4.4, lists IWE and IWL activities conducted by DNC personal, as stated in the submittal:

DNC Engineering performs IWE/IWL ISI inspection activities in support of the required Type A (ILRT) test. There will be no change to the schedule for these inspections due to the extension of the Type A test interval. The activities that assure continued containment integrity include:

The subsequent discussion only discusses IWE activities. Describe IWL actions and inspections that have identified problematic areas (such as significant cracking, spawling of concrete) and the disposition required by the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) Section XI.

6. For the examination of penetration seals and gaskets, and examination and testing of bolted connections associated with the primary containment pressure boundary (Examination Categories E-D and E-G), the licensee requested relief from the requirements of Section XI of the ASME Code, 1992 Edition, 1992 Addenda. As an alternative, the licensee proposed to examine the above items under the 1998 Edition, during the leak-rate testing of the primary containment. Option B of Appendix J for Type B and Type C testing (per Nuclear Energy Institute 94-01 and Regulatory Guide 1.163), and the ILRT extension requested in this amendment for Type A testing, provide flexibility in the scheduling of these inspections. Discuss your schedule for examination and testing of seals, gaskets, and bolted connections as modified by Title 10 of the *Code of Federal Regulations* Section 50.55a(b)(2)(ix) that provide assurance regarding the integrity of the containment pressure boundary.