

March 28, 2008

Mr. David A. Christian
President and Chief Nuclear Officer
Virginia Electric and Power Company
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060-6711

SUBJECT: MILLSTONE POWER STATION UNIT 3 – POTENTIAL SCHEDULE CHANGE
FOR PROPOSED STRETCH POWER UPRATE LICENSE AMENDMENT
REQUEST (TAC NO. MD6070)

Dear Mr. Christian:

By letter dated July 13, 2007,¹ as supplemented by additional letters,² Dominion Nuclear Connecticut, Inc. (DNC), licensee of the Millstone Power Station Unit 3 (MPS3), submitted the application, "Dominion Nuclear Connecticut, Inc., Millstone Power Station Unit 3, License Amendment Request, Stretch Power Uprate," to the U.S. Nuclear Regulatory Commission (NRC). The proposed license amendment would allow an increase in the maximum authorized power level from 3,411 megawatts thermal (MWt) to 3,650 MWt, and make changes to the technical specifications, as necessary, to support operation at the stretch power level.

The NRC staff schedule, as provided in the acceptance review letter dated October 15, 2007,³ was predicated on the assumption that all information and analyses would be submitted by the end of January 2008. The final Request for Additional Information (RAI) letter was sent to DNC on December 20, 2007, and DNC agreed to respond within 30 days. The following information and analyses were not received by January 31, 2008:

1. The updated control room fire analysis;
2. Summary of the final results of elastic-plastic analysis; and
3. The evaluations for the continued acceptability of the environmental qualification equipment with increased accident temperature in the Main Steam Valve Building and the increased radiation total integrated dose in selected Engineered Safety Features and Auxiliary Building zones.

¹ DNC Letter (07-450) to the NRC, "Dominion Nuclear Connecticut, Inc., Millstone Power Station Unit 3 License Amendment Request, Stretch Power Uprate," dated July 13, 2007 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML072000386).

² Supplemental Letters dated: July 13, 2007 (ML072000281); September 12, 2007 (ML072570061); November 19, 2007 (ML073230976); December 13, 2007 (ML073480240); December 17, 2007 (ML073520051); January 10, 2008 (ML080100600, ML080100604, ML080100606, ML080100611); January 11, 2008 (ML080110695, ML080140077, ML080170495, ML080580476); January 14, 2008 (ML080140570); January 18, 2008 (ML080220506, ML080220527, ML080220530, ML080220541, ML080280375); January 31, 2008 (ML080320308); February 25, 2008 (ML080560392, ML080560615); March 5, 2008 (ML080660108); March 10, 2008 (ML080710377, ML080710391); and March 25, 2008 (ML080850894).

³ ADAMS Accession No. ML072670216

D. Christian

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The enclosure to this letter presents a detailed discussion of the information and analyses not received by January 31, 2008, along with the current status of the NRC staff review in each respective area.

When your stretch power uprate application was received, the NRC staff scheduled its review activities. Implicit in this scheduling was an expectation that adequate time would be available to allow NRC staff to complete a thorough review of the application and any supplemental information requested by the NRC staff.

The NRC staff endeavors to complete power uprates in a timely manner to support the NRC's goals of efficiency and reliability. Based on the above, the current schedule for the completion of the proposed stretch power uprate amendment may be in jeopardy.

On March 27, 2008 via teleconference, Mr. Bill Bartron of your staff stated that the summary of the final results of the elastic-plastic analysis would be sent to the NRC on April 7, 2008.

Please note that if you do not respond to the outstanding summary of the final results of the elastic-plastic analysis by April 7, 2008, we may be required to revise the project schedule or reject your application for amendment under the provisions of Title 10 of the *Code of Federal Regulations*, Section 2.108.

If you have any questions, please contact Mr. Lamb at (301) 415-3100.

Sincerely,

/RA/

Harold Chernoff, Chief
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Enclosure: As stated

Docket No. 50-423

cc: See next page

D. Christian

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Harold Chernoff, Chief
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ADAMS Accession No: ML080460620

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REQUESTED INFORMATION AND ANALYSES

1. Updated Control Room Fire Analysis

In a letter dated November 26, 2007,¹ the NRC staff asked the following in a Request for Additional Information (RAI) under AFPB-07-0008:

LAR [License Amendment Request] Attachment 5, Section 2.5.1.4.2.3.7, "Operator Actions Required Following a Fire" states that "...[an] analysis was performed to determine the steam generator dryout time at the support stretch power uprate (SPU) power level; the results showed a dryout time of approximately 37 minutes. Therefore, there continues to be adequate time for the operator to manually initiate auxiliary feedwater to the steam generators (SGs) at SPU conditions..."

Discuss the response time, including any assumptions that may have been made in determining that the operator manual actions can confidently be accomplished before SG dryout.

In a letter dated December 17, 2007,² DNC provided the following response to AFPB-07-0008:

...Even with a decrease in steam generator dry-out time and an increase in the AFW flow initiation time, based on the availability of the large capacity turbine driven AFW pump, preliminary analysis has shown that the margin between 27 minutes and 34.67 minutes is still sufficient to assure that all BTP 9.5-1 criteria will be met. In order to provide a better estimate of the steam generator dry-out time as well as provide more complete documentation that all BTP 9.5-1 criteria can be met, an update to the control room fire analysis is in progress. Results of the updated control room fire analysis will be provided to you by February 29, 2008.

DNC supplied the updated control room fire analysis in a DNC supplemental letter (07-799A), dated February 25, 2008.³

The NRC staff is reviewing this updated control room fire analysis.

¹ ADAMS Accession No. ML073170665

² ADAMS Accession No. ML073520051

³ ADAMS Accession No. ML080560615

Enclosure

2. Summary of the Final Results of the Elastic-Plastic Analysis

In a letter dated December 14, 2007,⁴ the NRC staff asked the following in an RAI under EMCB-07-0072:

In addition to Table 2.2.3-3, various components listed in Tables 2.2.2.3-1.2.2.2.5.2.2-1 and 2.2.2.7.2-2 of LAR Attachment 5, which contain stress summaries, have failed to meet the NB-3222.2 primary plus secondary stress intensity requirement of 3Sm. Attachment 5 states that these components have been qualified by passing the simplified elastic-plastic analysis of NB 3228.5.

- a) Provide a summary of the evaluations which shows that the special rules for exceeding 3Sm as provided by (a) through (f) of subparagraph 3228.5 have been met.
- b) Tables 2.2.2.5.2.2-1 and 2.2.2.7.2-2 also provide acceptability of components, that failed to meet the 3Sm allowable, through NB-3228.3. Discuss the basis and show that you meet the requirements for using the NB-3228.3 criteria. Also provide a summary of the analysis results which shows that the requirements of NB-3228.3 have been met.

In a letter (07-0834D) dated January 14, 2008,⁵ DNC provided the following response to EMCB-07-0072:

Several steam generator and pressurizer locations have maximum stress ranges that exceed the 3Sm limit in NB-3222.2. Most of these sections meet the simplified elastic-plastic analysis criteria in NB-3228.3 of the ASME B&PV Code [American Society of Mechanical Engineers Boiler and Pressure Vessel Code], Section III, 1971 Edition through the summer 1973 Addendum (equivalent to NB-3228.5 in latter Code Editions). In NB-3228.3 there are six requirements, (a) through (f), which are satisfied. A summary showing that each of these requirements have been satisfied will be provided. In addition, those sections that exceed 3Sm and that were qualified by full elastic-plastic analysis will also be summarized in the response showing details of the plasticity analysis. Documentation of the final results of the elastic-plastic analysis is under development. A summary of the results will be provided by February 28, 2008.

DNC supplied the response to EMCB-07-0072 in a DNC supplemental letter (07-834J), dated February 25, 2008.⁶

The NRC staff reviewed this response and determined that the DNC supplemental letter (07-834J) did not fully answer EMCB-07-0072, as DNC did with EMCB-07-0071. The NRC staff held a conference call with your staff on February 27, 2008, discussing the DNC supplemental letter (07-834J). Your staff stated that they would provide the

⁴ ADAMS Accession No. ML073370384

⁵ ADAMS Accession No. ML080140570

⁶ ADAMS Accession No. ML080560392

summary of the final results of the elastic-plastic analysis like it was performed for the response to EMCB-07-0071. The staff encourages DNC to complete the summary of the final results of the elastic-plastic analysis as soon as possible so the NRC staff can complete the Safety Evaluation (SE) input.

3. Environmental Qualification Evaluations

In a letter dated December 14, 2007,⁷ the NRC staff asked the following in an RAI under EEEB-07-0052:

For the Main Steam Valve Building, Engineered Safety Features Building, and Auxiliary Building, the license amendment request, in Section 2.3.1, indicates that SPU conditions may affect the EQ of electrical equipment. Provide the complete evaluations of the affected equipment, including an in-depth discussion of the assumptions and methodology.

By DNC supplemental letter (07-0834C), dated January 10, 2008,⁸ DNC stated the following:

The evaluations for the continued acceptability of the EQ equipment with increased accident temperature in the Main Steam Valve Building (MSVB) and the increased radiation TID [total integrated dose] in selected Engineered Safety Features and Auxiliary Building zones are ongoing. The results will be available by March 31, 2008.

On March 25, 2008,⁹ DNC sent a supplemental response to RAI EEEB-07-0052. The NRC staff The NRC staff is reviewing this letter and the staff may have further RAI or clarifying questions.

⁷ ADAMS Accession No. ML073370384

⁸ ADAMS Accession No. ML080100600

⁹ ADAMS Accession No. ML080850894

Millstone Power Station, Unit No. 3

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