



Duquesne Light

Nuclear Division
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February 19, 1985

Director of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Attn: Mr. Steven A. Varga, Chief
Operating Reactors Branch No. 1
Division of Licensing
Washington, DC 20555

Reference: Beaver Valley Power Station, Unit No. 1
Docket No. 50-334, License No. DPR-66
Leak-Before-Break Analysis

Gentlemen:

In our July 31, 1984 letter we informed you of our intent to perform an evaluation to justify a leak-before-break position in order to resolve Unresolved Safety Issue A-2, "Asymmetric LOCA Loads," for Beaver Valley Unit 1. This evaluation has been completed and enclosed for your review are:

1. Five (5) copies of "Technical Bases for Eliminating Large Primary Loop Pipe Rupture as a Structural Design Basis for Beaver Valley Unit 1," dated December 1984, WCAP-10743 (Proprietary).
2. Five (5) copies of "Technical Bases for Eliminating Large Primary Loop Pipe Rupture as a Structural Design Basis for Beaver Valley Unit 1," dated December 1984, WCAP-10742 (Non-proprietary).

Also enclosed is a Westinghouse authorization letter, CAW-84-106, and accompanying affidavit.

Item 1 contains information proprietary to Westinghouse Electric Corporation, it is supported by an affidavit signed by Westinghouse, the owner of the information. The affidavit sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of Section 2.790 of the Commission's regulations.

Accordingly, it is respectfully requested that the information which is proprietary to Westinghouse be withheld from public disclosure in accordance with 10 CFR Section 2.790 of the Commission's regulations. Correspondence with respect to the proprietary aspects of the Application for Withholding or the supporting Westinghouse affidavit should reference CAW-84-106, and should be addressed to R. A. Wiesemann, Manager, Regulatory & Legislative Affairs, Westinghouse Electric Corporation, P.O. Box 355, Pittsburgh, PA 15230.

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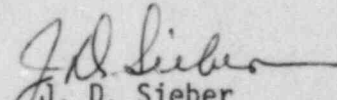
Included in WCAP-10743 is a discussion of the effects of thermal aging on the material toughness for the primary loop piping. From this review we have determined that the predicted end-of-life toughness for some of the material heats used in the primary loop piping does not meet the current Westinghouse toughness criteria to justify a leak-before-break analysis until end of life. However, we are able to justify a leak-before-break position for Beaver Valley Unit 1 for 11.7 years at operating temperature since all of the piping will exceed the Westinghouse toughness criteria for this period of operation.

We have calculated the cumulative thermal aging time for Beaver Valley Unit 1 primary loop piping as of December 31, 1984. As of this time, 5.24 years of thermal aging have occurred. This number is conservatively based on the time above 200°F (Mode 5). Therefore, as of January 1, 1985, 6.46 years at operating temperature remain before Beaver Valley Unit 1 limiting material heat reaches the toughness criteria.

Only a limited amount of testing of thermally aged material has been performed at this time. Therefore, only a limited database presently exists which does not envelop all of the existing material heats in service. Since the Westinghouse toughness criteria are based on the limited database, they also do not envelop all of the existing material heats in service, including some material heats used at Beaver Valley Unit 1. We are currently reviewing possible actions to resolve the thermal aging concerns for Beaver Valley Unit 1 and will inform you of our plans in future correspondence.

If you have any questions concerning this matter, please contact my office.

Very truly yours,


J. D. Sieber
Senior Manager
Nuclear Group

Attachments

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cc w/o attachments:

Mr. W. M. Trostkoski, Resident Inspector
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