

February 10, 1997

Mr. J. E. Cross
President-Generation Group
Duquesne Light Company
Post Office Box 4
Shippingport, PA 15077

14E21

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION (RAI) REGARDING PROPOSED UPDATE
OF THE PRESSURIZED THERMAL SHOCK ASSESSMENT FOR BEAVER VALLEY POWER
STATION, UNIT NO. 1 (BVPS-1) REACTOR VESSEL (TAC NO. M96303)

Dear Mr. Cross:

By letter dated August 2, 1996, Duquesne Light Company (DLC) submitted a reassessment of DLC's pressurized thermal shock (PTS) analysis for the BVPS-1 reactor vessel in accordance with the requirements of 10 CFR 50.61. This submittal was required because DLC had obtained updated information which affected this assessment. The NRC staff has begun its review of the August 2, 1996, submittal; however, we have determined that additional information is required for us to complete our review. The additional information that is required is described in our enclosed RAI. DLC is requested to provide its response to this RAI within 30 days of receipt of this letter for us to complete our review within a timely manner.

Should you have any questions on this matter, please contact me on
(301) 415-1409.

Sincerely,

Original signed by
Donald S. Brinkman, Senior Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-334

Enclosure: RAI

cc w/enclosure:
See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

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President-Generation Group
Duquesne Light Company
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Should you have any questions on this matter, please contact me on
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Sincerely,

A handwritten signature in cursive script, reading "Donald S. Brinkman".

Donald S. Brinkman, Senior Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-334

Enclosure: RAI

cc w/enclosure:
See next page

J. E. Cross
Duquesne Light Company

Beaver Valley Power Station
Units 1 & 2

cc:

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ATTN: S. C. Jain, Vice President
Nuclear Services (BV-A)

REQUEST FOR ADDITIONAL INFORMATION REGARDING
AUGUST 2, 1996 PRESSURIZED THERMAL SHOCK (PTS) REASSESSMENT
BEAVER VALLEY POWER STATION, UNIT NO. 1 (BVPS-1)
DOCKET NO. 50-334

In reviewing the PTS reassessment submitted by Duquesne Light Company (DLC) for the BVPS-1 reactor vessel on August 2, 1996, the NRC staff noted that several parts of the analysis had been reevaluated. In order to fully understand the effect of these reevaluations, the NRC staff also examined:

1. DLC's response to Generic Letter (GL) 92-01 dated July 8, 1992 (J.D. Sieber (DLC) to the U.S. Nuclear Regulatory Commission Document Control Desk)
2. A DLC submittal on the BVPS-1 reactor vessel surveillance program dated July 21, 1977 (C.N. Dunn to the United States Nuclear Regulatory Commission)

Licensees are required by 10 CFR 50.61 to evaluate pressurized water reactor vessels for susceptibility to pressurized thermal shock and to establish the unirradiated reference temperature $RT_{NDT(U)}$ according to the procedures in Paragraph NB-2331 of the ASME Code. Additionally, 10 CFR 50.61 requires that a standard deviation (σ_1) on the unirradiated reference temperature be determined "based upon the precision of the test method."

DLC's submittal in response to GL 92-01 (reference #1 above) indicated that results from Charpy testing of Plate B6903-1 in the materials certification test program were provided in Table 5 of that submittal. Additional Charpy testing of unirradiated Plate B6903-1 material was conducted in conjunction with the vessel's surveillance program and the results of these tests were submitted (along with the data from Table 5) in Table 10 of the response. Since additional data regarding the unirradiated material properties of Plate B6903-1 has been obtained subsequent to the materials certification program:

- (1) Explain which data was used to determine $RT_{NDT(U)}$ for Plate B6903-1 and which data was used to evaluate the unirradiated Charpy reference curve for the Plate B6903-1 surveillance material. If all of the data submitted in Table 10 of reference #1 are believed to be valid tests for determining the material properties of Plate B6903-1, provide a technical justification for the exclusion of certain data points if all of the data was not used in either of these evaluations.
- (2) If any of this data was excluded in the determination of the Plate B6903-1 $RT_{NDT(U)}$:

Enclosure

- (a) Explain how DLC's analysis meets the requirement of ASME Code paragraph NB-2331(a)(4) which states that the reference temperature may be determined "...from a full C_v impact curve developed from the minimum data points of all the C_v tests performed."
- (b) Evaluate what impact the inclusion of the additional data would have on DLC's determination of $RT_{NDT(U)}$ or σ_I .
- (3) Assess what impact any changes in $RT_{NDT(U)}$ or σ_I from DLC's response to question (2b.) would have on DLC's evaluation of the RT_{PTS} value for Plate B6903-1.
- (4) Submit for NRC staff review WCAP-14554, "Beaver Valley Unit 1 Fluence Reevaluation," dated June 1996 and referenced as the basis for the fluence values used in the BVPS-1 PTS assessment. The NRC staff must review the fluence results to assess DLC's determination of the vessel's end-of-license fluence values and the fluence values associated with the vessel's surveillance capsules.