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ADENSAM, E. G. BWR Project Directorate 3

SUBJECT: Forwards updated Pages 6A. 4-22 & 44 to Amend 27 to FSAR, in response to NRC 860820 questions. Pages will be included in subsequent FSAR update.

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NIAGARA MOHAWK POWER CORPORATION/300 ERIE BOULEVARD WEST, SYRACUSE, N.Y. 13202/TELEPHONE (315) 474-1511

August 22, 1986
(NMP2L 0840)

Ms. Elinor G. Adensam, Director
BWR Project Directorate No. 3
U.S. Nuclear Regulatory Commission
7920 Norfolk Avenue
Washington, DC 20555

Dear Ms. Adensam:

Re: Nine Mile Point Unit 2
Docket No. 50-410

Enclosed are updated Final Safety Analysis Report pages to respond to staff questions. These changes were discussed with the staff on August 20, 1986. Typed versions of these pages will be provided as soon as possible. These changes will be included in a subsequent Final Safety Analysis Report update.

Very truly yours,

C. V. Mangan
Senior Vice President

NRL/ar
1996G

Enclosures

xc: W. A. Cook, NRC Resident Inspector
Project File (2)

B001
1/1

UNITED STATES OF AMERICA
NULCEAR REGULATORY COMMISSION

In the Matter of)
Niagara Mohawk Power Corporation) Docket No. 50-410
(Nine Mile Point Unit 2))

AFFIDAVIT

C. V. Mangan, being duly sworn, states that he is Senior Vice President of Niagara Mohawk Power Corporation; that he is authorized on the part of said Corporation to sign and file with the Nuclear Regulatory Commission the documents attached hereto; and that all such documents are true and correct to the best of his knowledge, information and belief.

C. V. Mangan

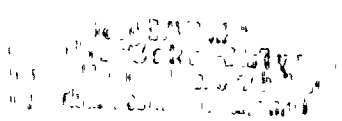
Subscribed and sworn to before me, a Notary Public in and for the State of New York and County of Onondaga, this 22nd day of August, 1986.

Christine Austin
Notary Public in and for
Onondaga County, New York

My Commission expires:

CHRISTINE AUSTIN
Notary Public in the State of New York
Qualified in Onondaga Co. No. 4787687
My Commission Expires March 30, 1987

(1998G)



6A.4.6.4 Chugging Fatigue Analysis

6A.4.6.4.1 General

Chugging is characterized by a burst of pressure pulses separated by a quiescent period. As is, it can be described as a series of isolated load histories called occurrences, separated by short periods of zero hydrodynamic activity.

For every pool chug, the associated time history exhibits random variation in the dominant frequency and amplitude. Hence, it would be overly conservative to perform fatigue analysis by applying the design load (which was derived to conservatively bound all expected loads) with the estimated total occurrence frequency of the chugging downcomer. A more realistic approach is to obtain from a library dynamic loading time histories with varying amplitudes that will occur during a downcomer load. This result (in terms of an equivalent occurrence factor [EOF]) is then utilized to reduce the total number of loading cycles per downcomer that is used for fatigue analysis.

6A.4.6.4.2 Equivalent Occurrence Factor

The chugging EOF is obtained in the following manner:

1. Tabulate the histogram or the frequency of occurrence of the maximum chug amplitude for each of the six key runs from 4TCO data[10].

2. Normalize the frequency distribution to the maximum amplitude value (ratio frequency distribution).

3. Multiply the probability of value within a given range (occurrence frequency) by its corresponding amplitude ratio raised to the power 4.3[20]. For the downcomer evaluation, the magnitude ratio was raised to the power 3.0.

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4. Sum all the resulting products of Step 3 and obtain the EOF for each of the six key runs.

Table 6A.4-12 presents the calculated EOF for each of the six key runs. The maximum EOF obtained is 0.12 for 4TCO Run 26 which is rounded up to (0.2)[10] 0.25

6A.4.6.4.3 Maximum Number of Chugs in a LOCA

The maximum duration of chugging for any postulated LOCA is desired for fatigue load calculations. A LOCA with a small break area results in an extended period of relatively low downcomer steam mass flux, Gv. Although an SBA could last

TABLE 1.8-1 (Cont)

Regulatory Guide 1.43 (May 1973)

Control of Stainless Steel Cladding of Low-Alloy Steel Components

FSAR Sections 5.2.3.3, 5.3.1.4

Position

The Unit 2 project complies with the Regulatory Position (Paragraph C) of this guide.

RPV specifications require that all low alloy steel be produced to fine grain practice. The requirements of this regulatory guide are not applied to BWR vessels. 27