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DESCRIPTION:

Ltr re our 4-17-and 4-23-75 ltrs .... furn addl info relative to the status of the Mark II Supporting Program .....trans the following:

Dist Per V. Wilson

PLANT NAME: WPPSS #2

ENCLOSURES:

Load Combination For Mark II Containments
Concrete Structures Hydrodynamic Loads
.....

ACKNOWLEDGED
DO NOT REMOVE

FOR ACTION/INFORMATION 11-20-75 JGB

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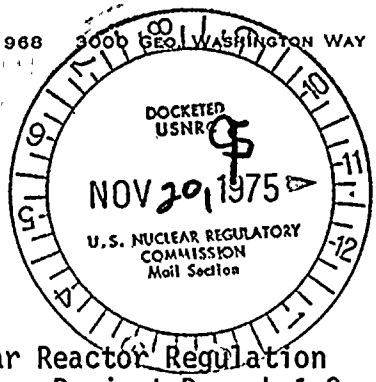

Docket No. 50-397

November 10, 1975
G02-75-310

Director of Nuclear Reactor Regulation
Light Water Reactors Project Branch 1-3
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Mr. Olan D. Parr

Subject: WPPSS NUCLEAR PROJECT NO. 2
MARK II CONTAINMENT PROGRAM

References:
1) Letter, W.R. Butler to J.J. Stein, Supression Pool Hydrodynamic Loads During LOCA, April 17, 1975.
2) Letter, W.R. Butler to J.J. Stein, Pool Dynamic Loads Due to Relief Valve Operation, April 23, 1975.
3) Letter, J.J. Stein to W.R. Butler, BWR Mark II Containment-Additional Design Information, June 5, 1975. (G02-75-163)
4) Letter N.O. Strand to O.D. Parr, Mark II Containment Information-Current Design Drawings, July 25, 1975. (G02-75-210)
5) Letter, N.O. Strand to O.D. Parr, Mark II Containment-Supporting Program, September 16, 1975. (G02-75-261)

Dear Mr. Parr:

In your April 17 and 23, 1975 letters (References 1 and 2) to us, you requested that we provide further information on the adequacy of the Mark II Containment on our WPPSS Nuclear Project No. 2 with respect to recently identified hydrodynamic loads. The purpose of this letter is to:

o Provide information relative to the status of the Mark II Supporting Program.

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- Reference recent generic documents containing information felt applicable in determining Mark II containment dynamic loads on the WPPSS Nuclear Project No. 2 docket.

- Provide table of load factors for concrete structures.

In Attachment "A" of our June 5, 1975 letter (Reference 3), we provided to you our schedule for conducting an assessment of our containment structures. Item 1 of Attachment "A" was submitted to you on July 25, 1975. Item 2 and a portion of Item 3 of Attachment "A" are covered by the Mark II Containment Dynamic Forcing Function Information Report (DFFR) NEDO-21061 and NEDE-21061P. The DFFR was transmitted via GE letter from I.F. Stuart to R. Boyd dated October 24, 1975, and contains phenomena descriptions which will be used to evaluate the Mark II containment for the WPPSS Nuclear Project No. 2. Item 2 was submitted later than expected due to additional technical efforts required to complete the DFFR and the inclusion of phenomenological information on Item 3. As a consequence, Item 4, our plant unique report, is now expected to be submitted in the December 1975 to January 1976 time period. We also expect to complete and include the remaining answers to Item 3 in that plant unique report.

On June 30, 1975 the Mark II Containment Owners presented to the NRC an outline and schedule for the Mark II Supporting Program. This Supporting Program, Item 5, was submitted to you on September 16, 1975 (Reference 5). The status of this Program is as follows. Under LOCA Related Activities, Item A.3 (Impact Tests on Pool Internal Structures) and Item A.4 (Qualification of Impact Model) are covered by recently submitted documents NEDE-13426-P Class III, and NEDC-20989-2P (Vol. 2) respectively. The following documents have been submitted to address Item B.2 (Relief Valve Pipe Clearing for Ramshead) under the Safety/Relief Valve Related Activities:

1) For modeling - NEDO-20942 and NEDE-20942P.

2) For test comparisons - NEDO-21062 and NEDE-21062P.

The attached table of load factors will be used to evaluate the WPPSS Nuclear Project No. 2 concrete structures inside containment. This table identifies the numerical values and is complementary to Table 5.2.1 in the DFFR. As you know, our WPPSS Nuclear Project No. 2 containment is a free-standing steel structure governed by Division 1 (NE-3000) of Section III of the ASME Code.

As a member of the Mark II Owners Group, we will be closely following the progress of the Supporting Program and keep you advised of its progress. Any reports, data or analyses which become available during the Supporting Program, will be forwarded to the NRC through appropriate channels.

Very truly yours,

N. O. STRAND
Assistant Director,
Generation and Technology

NOS:GLG:kw

Attachment

cc: JJ Byrnes - Burns & Roe, Inc.
FA MacLean - General Electric
D Roe - Bonneville Power Administration
JJ Verderber - Burns & Roe, Inc.

LOAD COMBINATION FOR MARK II CONTAINMENTS CONCRETE STRUCTURES HYDRODYNAMIC LOADS

EQN.	LOAD COND.	D	L	F	P_o	T_o	R_o	E_o	E_{ss}	P_B	P_A	T_A	R_A	R_r	SRV
1	Normal w/o Temp	1.4	1.7	1.0	1.0	-	-	-	-	-	-	-	-	-	1.5
2	Normal w/Temp	1.0	1.3	1.0	1.0	1.0	1.0	-	-	-	-	-	-	-	1.3
3	Normal Ser. Env.	1.0	1.0	1.0	1.0	1.0	1.0	1.25	-	-	-	-	-	-	1.25
4	Abnormal	1.0	1.0	1.0	-	-	-	-	-	1.25	-	1.0	1.0	-	1.25
4a	Abnormal	1.0	1.0	1.0	-	-	-	-	-	-	1.25	1.0	1.0	-	-
5	Abnormal Sev. Env.	1.0	1.0	1.0	-	-	-	1.1	-	1.1	-	1.0	1.0	-	1.1
5a	Abnormal Sev. Env.	1.0	1.0	1.0	-	-	-	1.1	-	-	1.1	1.0	1.0	-	-
6	Normal Ext. Env.	1.0	1.0	1.0	1.0	1.0	1.0	-	1.0	-	-	-	-	-	1.0
7	Abnormal Ext. Env.	1.0	1.0	1.0	-	-	-	-	1.0	1.0	-	1.0	1.0	1.0	1.0
7a	Abnormal Ext. Env.	1.0	1.0	1.0	-	-	-	-	1.0	-	1.0	1.0	1.0	1.0	-

LOAD DESCRIPTION

D = Dead Loads

L = Live Loads

F = Prestressing Loads

T_o = Operating Temperature Loads

R_o = Operating Pipe Reactions

P_o = Operating Pressure Loads

SRV = Safety/Relief Valve Loads

E_o = Operating-Basis Earthquake

E_{ss} = Safe Shutdown Earthquake

P_B = SBA or IBA Pressure Load

P_A = DBA (LOCA) Pressure Load

T_A = Pipe Break Temperature Load

R_A = Pipe Break Temperature Reaction Loads

R_r = Reaction and jet forces associated with the pipe break