UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

May 25, 1984

Docket Nos: 50-329 OM, OL
and 50-330 OM, OL

Mr. J. W. Cook
Vice President
Consumers Power Company
1945 West Parnall Road
Jackson, Michigan 49201

Dear Mr. Cook:

Subject: Request for Additional Information Regarding
Volume IX of Seismic Margin Review Reports

The NRC staff, with the technical assistance of its consultant from Energy Technology Engineering Center, has reviewed mechanical engineering aspects of Volume IX of the Seismic Margin Review reports. Volume IX, entitled "Balance of Plant (BOP) Class 1, 2 and 3 Piping, Pipe Supports and Valves", was forwarded under your coverletter dated February 9, 1984.

We find that additional information, identified in the enclosure, is needed to complete this review. Please provide your response to the enclosure within 30 days of receipt of this letter. A copy of your response should also be forwarded directly to our ETEC consultant. Contact our project manager should you require clarification of the enclosure or are unable to meet this response date.

The reporting and/or recordkeeping requirements contained in this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P.L. 96-511.

Sincerely,

Elinor G. Adensam

Elinor G. Adensam, Chief
Licensing Branch No. 4
Division of Licensing

Enclosure:
As stated

cc: See next page

DESIGNATED ORIGINAL

Certified By

MIDLAND

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ENCLOSURE

REQUEST FOR ADDITIONAL INFORMATION AND CLARIFICATION
REGARDING VOLUME IX TO SMR REPORT

Provide the following additional information and clarifications with respect to Volume IX, "Balance of Plant Class 1, 2 and 3 Piping, Pipe Supports and Valves", which is part of the Seismic Margin Review Reports for Midland:

1. (Pg. IX-5-3) Explain the derivation of EQ (5-1).

2. (Pg. IX-6-1) Explain "Drawings of each pipe support were also reviewed in order to assess appropriateness of stiffness assumptions used in modeling." Was generic stiffness, estimated and/or calculated stiffness or NUPIPE default stiffness used?

3. (Pg. IX-6-5) Explain why two "Class 1 and 3/4" Class 1 lines were analyzed in accordance with Class 2 rules because of the small line size."

4. (Pgs. IX-6-6, IX-6-32) Explain your use of 3% (SSE) damping for the 12" nominal line. This is not in agreement with Reg. Guide 1.61 October 1976. The Reg. Guide states that 2% (SSE) damping should be used for lines equal to or less than 12".

5. (Pg. IX-6-22) With respect to thermal anchor displacements, does the Z displacement include the radial expansion of the 36" diameter of the 36" - 2 CCA-1 line?

6. (Pgs. IX-6-32, IX-6-70, IX-6-83) Explain why the assumption that the seismic displacement of the reactor building supports being out-of phase with the auxiliary building supports will always result in higher support loads.

7. (Pg. IX-6-55) Your statement "With the 3% damped spectra being selected since virtually the entire system consists of large piping equal to or greater than 12-inch nominal diameter" does not agree with Reg. Guide 1.61 October 1976. Large piping is defined as greater than 12" and small piping is defined as equal to or less than 12". Thus the 2% damped spectra should be used for the 12" line 12"-1HCB-6. Justify or correct the value used.

8. (Pg. IX-6-83) Explain why there is no Z earthquake anchor displacement for anchor nodes 800 and 875.

9. (Pg. IX-6-104) Explain why all the thermal anchor displacements for the four different operating cases are the same.

9. (Pg. IX-6-104) Explain why all the thermal anchor displacements for the four different operating cases are the same.

10. (Pg. IX-7-13) The snubber at Node 395 (1-610-3-22) has a seismic margin load of ± 2802 lb and a CM and F_{sme} = 4.61. The snubber at Node 406 (1-610-3-45) has a seismic margin load of ± 2785 lb and a CM and F_{sme} = 1.55. Explain why there is a large difference in the CM values.

11. (Pg. IX-7-24) The snubber at Node 214 (0-618-1-502) implies that it may be a Pacific Scientific Snubber Model 10K or equivalent. If this is true explain why its stiffness which is 1.74×10^5 in was not included in the computer model for the 36" piping of the service water system along with the calculated beam and strainer nozzle stiffness.

12. General What ASME Section III Edition Stress Indices for Class 1 Analysis did the NUPIPE computer use?

13. The staff assumes the following to be typographical errors. Please confirm this assumption, or justify your position:

Page	Staff Comment
IX-4-1	"SSE" should be "SME" (two places).
IX-5-8	"Snubber (z)" should be "Y Restraint". See Pg. IX-7-25.
IX-6-178 and IX-6-198 to 201	"Class 2 Stresses" should be "Class 3 Stresses".