



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

May 25, 1984

DMB

*orig*

PRINCIPAL STAFF	
RA	DE
D/RA	DE
A/RA	DE
RC	DE
P/O	DE
SA	ML
	File

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, Chief  
Licensing Branch No. 4  
Division of Licensing

Enclosure:  
As stated

cc: See next page

8406010343 840525  
PDR ADOCK 05000329  
A PDR

MAY 29 1984  
JE0111

MIDLAND

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

cc: Michael I. Miller, Esq.  
Ronald G. Zamarin, Esq.  
Alan S. Farnell, Esq.  
Isham, Lincoln & Beale  
Three First National Plaza,  
51st floor  
Chicago, Illinois 60602

James E. Brunner, Esq.  
Consumers Power Company  
212 West Michigan Avenue  
Jackson, Michigan 49201

Ms. Mary Sinclair  
5711 Summerset Drive  
Midland, Michigan 48640

Stewart H. Freeman  
Assistant Attorney General  
State of Michigan Environmental  
Protection Division  
720 Law Building  
Lansing, Michigan 48913

Mr. Wendell Marshall  
Route 10  
Midland, Michigan 48640

Mr. R. B. Borsum  
Nuclear Power Generation Division  
Babcock & Wilcox  
7910 Woodmont Avenue, Suite 220  
Bethesda, Maryland 20814

Cherry & Flynn  
Suite 3700  
Three First National Plaza  
Chicago, Illinois 60602

Mr. Don van Farrowe, Chief  
Division of Radiological Health  
Department of Public Health  
P. O. Box 33035  
Lansing, Michigan 48909

Mr. Steve Gadler  
2120 Carter Avenue  
St. Paul, Minnesota 55108

U.S. Nuclear Regulatory Commission  
Resident Inspector's Office  
Route 7  
Midland, Michigan 48640

Ms. Barbara Stamiris  
5795 N. River  
Freeland, Michigan 48623

Mr. Paul A. Perry, Secretary  
Consumers Power Company  
212 W. Michigan Avenue  
Jackson, Michigan 49201

Mr. Walt Apley  
c/o Mr. Max Clausen  
Battelle Pacific North West Labs  
(PNWL)  
SIGMA IV Building  
Battelle Blvd.  
Richland, Washington 99352

Mr. I. Charak, Manager  
NRC Assistance Project  
Argonne National Laboratory  
9700 South Cass Avenue  
Argonne, Illinois 60439

James G. Keppler, Regional Admin.  
U.S. Nuclear Regulatory Commission,  
Region III  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

cc: Mr. Ron Callen  
Michigan Public Service Commission  
6545 Mercantile Way  
P. O. Box 30221  
Lansing, Michigan 48909

Ms. Julie Morrison  
Midland Daily News  
124 McDonald Street  
Midland, Michigan 48640

Billie Pirner Garde  
Director, Citizens Clinic  
for Accountable Government  
Government Accountability Project  
Institute for Policy Studies  
1901 Que Street, N.W.  
Washington, D. C. 20009

Mr. Howard Levin, Project Manager  
TERA Corporation  
7101 Wisconsin Avenue  
Bethesda, Maryland 20814

Ms. Lynne Bernabei  
Government Accountability Project  
1901 Q Street, N.W.  
Washington, D. C. 20009

Supplemental page to the Midland OM, OL Service List

Mr. J. W. Cook

- 3 -

cc: Commander, Naval Surface Weapons Center  
ATTN: P. C. Huang  
White Oak  
Silver Spring, Maryland 20910

Mr. L. J. Auge, Manager  
Facility Design Engineering  
Energy Technology Engineering Center  
P. O. Box 1449  
Canoga Park, California 91304

Mr. Neil Gehring  
U.S. Corps of Engineers  
NCEED - T  
7th Floor  
477 Michigan Avenue  
Detroit, Michigan 48226

Charles Bechhoefer, Esq.  
Atomic Safety & Licensing Board  
U.S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Dr. Frederick P. Cowan  
Apt. B-125  
6125 N. Verde Trail  
Boca Raton, Florida 33433

Jerry Harbour, Esq.  
Atomic Safety and Licensing Board  
U.S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Geotechnical Engineers, Inc.  
ATTN: Dr. Steve J. Paulos  
1017 Main Street  
Winchester, Massachusetts 01890

ATTN: Clyde Herrick  
Franklin Research Center  
20th & Race Streets  
Philadelphia, Pennsylvania 19103

Mr. Patrick Bassett  
Energy Division  
Norwest Bank Minneapolis, N.A.  
8th and Marquette  
Minneapolis, Minnesota 55479

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. Explain the derivation of EQ (5-1).  
(Pg. IX-5-3)
2. 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?  
(Pg. IX-6-1)
3. 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."  
(Pg. IX-6-5)
4. 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".  
(Pgs. IX-6-6, IX-6-32)
5. 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?  
(Pg. IX-6-22)
6. 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.  
(Pgs. IX-6-32, IX-6-70, IX-6-83)
7. 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.  
(Pg. IX-6-55)
8. Explain why there is no Z earthquake anchor displacement for anchor nodes 800 and 875.  
(Pg. IX-6-83)
9. Explain why all the thermal anchor displacements for the four different operating cases are the same.  
(Pg. IX-6-104)

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

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

11. The snubber at Node 214 (0-618-1-502) implies that  
(Pg. IX-7-24) it may be a Pacific Scientific Snubber Model 10K  
or equivalent. If this is true explain why its  
stiffness which is  $1.74 \times 10^5$  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. What ASME Section III Edition Stress Indices for  
General 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:

<u>Page</u>	<u>Staff Comment</u>
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".