

Docket Nos: 50-329
and 50-330

DEC 7 1982

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

Dear Mr. Cook:

Subject: Request for Additional Information on SER Outstanding
Items: Vessel Head Vent and Locked Rotor Accident

DISTRIBUTION:

Docket Nos. 50-329/330

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EAdensam
MDuncan
DHood
DEisenhut/RPurple
Attorney, OELD
ELJordan, DEQA:I&E

SER Sections 1.7(9) and 5.4.7 identified reactor vessel head vents as one of the outstanding open items resulting from the NRC staff's safety review of Midland Plant, Units 1 & 2. The staff has reviewed your letter of August 26, 1982, which commits to installation of a head vent and provides preliminary design and schedule information to this end. We find that additional information requested by Enclosure 1 is required for the staff to complete its safety review of the vent design and your request for schedule exemption.

Similarly, SER Sections 1.8(31) and 15.3.2 identified analysis of a reactor coolant pump locked rotor with loss of offsite power to be a confirmatory issue. We have reviewed your response of September 1, 1982, and find that it does not address the effect of loss of offsite power to the undamaged reactor coolant pumps, the extent of fuel damage, nor the effect of single failure on offsite dose. Enclosure 2 restates our requirements in this regard.

You are requested to respond to Enclosures 1 and 2 within 30 days of receipt of this letter. Contact our Project Manager, Darl Hood at (301) 492-8474, should you have any questions or schedule difficulties with these requests.

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

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PDR ADOCK 05000329
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Enclosures:
As stated

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| OFFICE | cc: See next page DL:LB #4 | LA:DL:LB#4 | DL:LB/#4 | | | |
| SURNAME | DHood/hmc | MDuncan | EAdensam | | | |
| DATE | 12/2/82 | 12/2/82 | 12/6/82 | | | |

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. Roger W. Huston
Suite 220
7910 Woodmont Avenue
Bethesda, Maryland 20814

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 Inspectors 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)
Battelle Blvd.
SIGMA IV Building
Richland, Washington 99352

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

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

Mr. J. W. Cook

- 2 -

cc: Lee L. Bishop
Harmon & Weiss
1725 I Street, N.W., Suite 506
Washington, D. C. 20006

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

Mr. Paul Rau
Midland Daily News
124 McDonald Street
Midland, Michigan 48640

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

REQUEST FOR ADDITIONAL INFORMATION
REGARDING REACTOR VESSEL HEAD VENT

1. Provide a description of operator action and procedures for utilizing the reactor vessel head vent proposed in your letter of August 26, 1982.
2. Provide a comparison of the sensitivity of the hot leg level instrumentation relative to the amount of noncondensable gas volume which might block natural circulation.
3. For transients and accidents which could result in steam formation in the reactor vessel head, the proposed head vent design appears to allow steam to accumulate in a hot leg. Such accumulation might block natural circulation faster than if no vent were present. We require that the acceptability of the proposed vent design be confirmed with experimental data from an intergal system test facility. Also, as justification for operation until this experimental data is provided, provide analyses of representative small break LOCAs and other events which could form a head bubble of steam and/or noncondensable gases which have come out of solution (i.e., hydrogen) which might be vented to the hot leg.
4. If a hot leg vent is ultimately relied upon to relieve steam from the head for transients and accidents, justify that the hot leg vent is safety grade for that purpose or justify why it need not be.
5. If operator action is required to operate the hot leg vents to vent steam, provide an evaluation of the information available to the operator to open the vents, to close the vents, and the times available for these actions.
6. Provide the seismic and environmental standards which will be met by the reactor vessel head vent.
7. Provide the piping areas and the maximum venting rates for steam and hydrogen for the proposed head vent design.
8. Regarding your request for an exemption to the requirements of 10 CRR 50.44 until the first refueling outage, provide an evaluation of the radiation dose which would be received by plant personnel in installing the vent at that time. Provide appropriate justification for the calculated doses relative to a more timely installation.

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REQUEST FOR ADDITIONAL INFORMATION

REGARDING LOCKED ROTOR ACCIDENT

The analysis of a reactor coolant pump locked rotor accident, presented in your letter of September 1, 1982, for initial two pump operation is not in accordance with the requirements of Standard Review Plan (SRP) 15.3.3 since no loss of offsite power or single failure was assumed. Provide an analysis of the percent of fuel rods which might experience DNBR below 1.3 as a result of loss of offsite power to the undamaged reactor coolant pump. Appropriate delay times may be assumed for loss of offsite power if suitably justified. Initial 4, 3, and 2 reactor coolant pump operation should be considered. As discussed in our letter of June 25, 1982, you may justify that those fuel rods which experience DNBR below 1.3 do not release fission products or provide offsite dose calculations assuming that the rods fail. In accordance with SRP 15.3.3, offsite dose calculations should assume maximum technical specification primary to secondary leakage and an additional single failure (e.g., stuck open secondary relief valve). Operator action to isolate stuck open valves may be assumed if suitably justified.

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