



General Offices: 1945 West Parnall Road, Jackson, MI 49201 • (517) 788-1636

**Kenneth W Berry**  
Director  
Nuclear Licensing

October 27, 1989

Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT -  
RESPONSE TO GENERIC LETTER 88-20, INDIVIDUAL PLANT EXAMINATION  
FOR SEVERE ACCIDENT VULNERABILITIES (TAC NO. 74444)

Nuclear Regulatory Commission Generic Letter 88-20, Individual Plant Examination for Severe Accident Vulnerabilities, dated November 23, 1988 requests existing plants to perform a systematic examination to identify any plant-specific vulnerabilities to severe accidents and submit a proposed program for completing the requested individual plant evaluation (IPE). Consumers Power Company's proposed program for the Palisades Plant is provided herein.

For the Palisades Plant, Consumers Power Company will develop a Probabilistic Risk Assessment (PRA) to fulfill the requirements of Generic Letter 88-20. The risk assessment will be completed in a manner generally consistent with the guidance of NUREG/CR-2300, "PRA Procedures Guide". The completed analysis will be a "near" Level 2 PRA. The assessment is identified as a "near" Level 2 PRA because one principal task of a full Level 2 PRA is not planned. A detailed plant specific containment structural analysis will not be completed. Instead, conclusions concerning the capacity and failure mode of the Palisades containment will be made based on review of detailed analyses of similar containment structures as allowed by Appendix 1 of the Generic Letter.

In support of the IPE process, system models are being developed. The models used for the IPE will accurately model the plant and normally contain site specific reliability data as of December 1989. The impact of changes in the plant between December 1989 and completion of the IPE will be considered, and models will be updated for those changes which are significant to the overall results. Plant specific data collection has been initiated. Common cause failure analysis will be performed according to "Procedures for Treating Common Cause Failures in Safety and Reliability Studies", NUREG/CR-4780. Human reliability analysis (HRA) will be conducted using the SHARP (Systematic Human Action Reliability Procedures, EPRI NP 3583) methodology. Plant response, timing of key events and the impact of important physical processes

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will be evaluated for representative severe accident progressions using the Modular Accident Analysis Program (MAAP) version 3.0B. Extensive sensitivity/uncertainty analyses will be conducted to address unresolved phenomenological issues.

The Palisades IPE will include an evaluation of vulnerabilities associated with loss of decay heat removal (USI A-45). Other generic and unresolved safety issues will be considered as the evaluations proceed, and results reported explicitly, as outlined in NUREG-1335.

The IPE process for the Palisades Plant will be completed within the three year allotted time frame. Identification and development of required models for the front-end and back-end should be completed by the end of 1990. Quantification of the accident sequences will be completed by the fourth quarter of 1991. Supporting MAAP analyses should be completed by the end of 1991. Documentation of the process, identification of dominant contributors and development of strategies to deal with identified vulnerabilities will be completed in 1992. Submittal of the results is planned by the end of the third quarter 1992.



Kenneth W Berry  
Director, Nuclear Licensing

CC Administrator, Region III, USNRC  
NRC Resident Inspector - Palisades  
NUMARC

## CONSUMERS POWER COMPANY

Palisades Plant  
Docket 50-255 License DPR-20


Response to Generic Letter No 88-20

At the request of the Commission and pursuant to the Atomic Energy Act of 1954 and the Energy Reorganization Act of 1974, as amended, and the Commission's Rules and Regulations thereunder, Consumers Power Company submits our response to NRC Generic Letter 88-20 dated November 23, 1988, entitled, "Individual Plant Examination for Severe Accident Vulnerabilities". Consumers Power Company's response is dated October 27, 1989.

CONSUMERS POWER COMPANY

To the best of my knowledge, information and belief, the contents of this submittal are truthful and complete.

By

  
David P Hoffman, Vice President  
Nuclear Operations

Sworn and subscribed to before me this 27th day of October 1989.

  
Elaine E Buehrer, Notary Public

Jackson County, Michigan

My commission expires October 11, 1993