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MAY 04 1978

Docket No. 50-255

Consumers Power Company  
ATTN: Mr. David Bixel  
Nuclear Licensing Administrator  
212 West Michigan Avenue  
Jackson, Michigan 49201

Docket  
NRC PDR  
Local PDR  
ORB RDG #2  
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BGrimes  
OELD  
OI&E (3)  
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RSilver  
DEisenhut  
TBAbernathy  
JRBuchanan  
ACRS (16)

Gentlemen:

In our Safety Evaluation supporting issuance of Amendment No. 31 to Provisional Operating License No. DPR-20 for the Palisades Plant, we found that radiation exposures to control room operators under postulated accident conditions had not been analyzed in the Palisades FSAR or reviewed by the staff. We stated that delayed resolution of this matter was acceptable but that we would resolve the matter with you prior to Cycle 3.

Since issuance of Amendment 31 we have initiated the Systematic Evaluation Program which includes control room habitability as a topic. We have determined that it would be appropriate to resolve the acceptability of radiation exposures to control room operators within the context of the SEP review and on a schedule compatible with that review. We have already determined, however, that we need additional information from you to enable us to continue our review of this matter. The needed information is identified in the enclosure.

Sincerely,

Original signed by:  
Dennis L. Ziemann

Dennis L. Ziemann, Chief  
Operating Reactors Branch #2  
Division of Operating Reactors

Enclosure:  
As stated

cc: See next page

OFFICE >	ORB#2:DOR	ORB#2:DOR	DOR: SEP	DOR: AD/S&P		
SURNAME >	RSilver:sah	DLZiemann	DDavis	DEisenhut		
DATE >	4/24/78	4/25/78	4/25/78	5/1/78		

May 4, 1978

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Kalamazoo, Michigan 49006

ENCLOSURE 1

PALISADES PLANT

DOCKET NO. 50-255

REQUEST FOR ADDITIONAL INFORMATION

1. Estimate the radiation doses to control room operators following a design basis LOCA. Include at least the following information and the basis for each assumption in your response:

- a. Assumed credit for engineered safety features, such as iodine removal by containment sprays.
- b. Assumed atmospheric dispersion factors ( $X/Q$ ) for the control room air intake vent, the data source (e.g., meteorological records, literary references, etc.) for these  $X/Q$ 's and other assumptions made in reaching the  $X/Q$  values used in your analysis (e.g., release height, distance and direction to receptor, building wake factor, wind direction changes, etc.)

Note: For estimating  $X/Q$ 's for the Palisades control room air intake for releases from the plant stack and for releases from a diffuse source as close as the Palisades containment is to the control room air intake, the methods given in Reference 1 may not be adequately conservative. Therefore, your response should include adequate justification of your method for estimating control room intake vent  $X/Q$ 's.

- c. Assumed duration of operation of the control room emergency charcoal filter after the initial automatic isolation of the normal control room air intake and exhaust on receipt of a containment isolation signal.
- d. Assumed iodine removal efficiency of the charcoal filter in the control room emergency ventilation system.
- e. Assumed rate of unfiltered air inleakage, including such leak paths as control room doors, ducts, penetrations, outside air isolation dampers, and contaminated air from rooms adjacent to those served by the control room HVAC.
- f. Assumed volume served by the control room HVAC.
- g. Assumed frequency of operating crew changes after the accident.
- h. Assumed credit for any other dose mitigating equipment, such as respiratory protection devices.

2. If the estimated doses to the control room operators for the course of the design basis LOCA are greater than the dose guidelines of General Design Criterion 19 (10 CFR, Part 50, Appendix A) and Standard Review Plan 6.4, indicate what can be done to reduce the doses to within those guidelines.

For your reference in this dose analysis see the following:

- 1. Murphy, K. G. and K. M. Campe, "Nuclear Power Plant Control Room

Ventilation System Design for Meeting General Design Criterion 19,"  
Proceedings of the Thirteenth AEC Air Cleaning Conference, August,  
1974.

2. U. S. NRC Standard Review Plan 6.4, "Habitability Systems,"  
NUREG 75/087.
3. U. S. NRC Standard Review Plan 15.6.5, Appendix A, "Radiological  
Consequences of a Design Basis Loss-of-Coolant Accident: Contain-  
ment Leakage Contribution," and Appendix B, ".... Leakage from En-  
gineered Safety Features Components Outside Containment."