2-5-73

UNITED STATES OF AMERICA
ATOMIC ENERGY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
WISCONSIN PUBLIC SERVICE CORPORATION	)	
WISCONSIN POWER AND LIGHT COMPANY	)	Docket No. 50-305
AND	)	
MADISON GAS AND ELECTRIC COMPANY	)	
	)	
(Kewaunee Nuclear Power Plant)	)	

AFFIDAVIT IN SUPPORT OF
MOTION FOR SUMMARY DISPOSITION

State of Maryland)
) ss
County of Montgomery)

The undersigned, Dominic Tondi, being first duly sworn, hereby deposes and says as follows:

1. A statement of by background and qualifications has been filed and is a part of the Docket in this matter.

2. Contention 3.13.2.2

Based on our evaluation of the Kewaunee application we concluded that the Class IE electrical and protection systems, when installed in accordance with the documented cable separation criteria, are acceptable. We reached this conclusion based upon the following principal design requirement:

"That the cable separation provide sufficient isolation between redundant systems so that no single failure or incident can render both redundant systems inoperable or remove them from service."

Briefly, the following salient criteria have been submitted in the application and satisfy the above statement and our requirements for a plant of the Kewaunee era.

- Redundant circuitry for reactor protection and engineered safety features are separated into groups. This criterion would be acceptable for present PSAR applications.

- Power cables are not mixed in trays with instrument and control cables. This criterion would be acceptable for present PSAR applications.

- Each group is routed in a separate tray, ladder, trough, or conduit. The routing (tray and cable) is identified to insure group separation. This criterion would be acceptable for present PSAR applications.

- Within the containment building 2/3 reactor protection system instrument tray channels are separated approx-

imately 20 feet horizontally and 5 feet vertically and 2/4 channels are separated 3 feet horizontally and 5 feet vertically. Where it is impractical to maintain a 5-foot vertical separation solid metal barriers are installed. This criterion would be acceptable for present PSAR applications.

. Trays for redundant load groups are separated by 40 feet at the reactor containment penetration. This criterion would be acceptable for present PSAR applications.

. Class IE trays containing instruments, control, or power cables have a minimum horizontal separation between redundant circuits of 3 feet. If spacing cannot be maintained barriers will be provided. This criterion would be acceptable for present PSAR applications.

. Trays for redundant groups in the Relay Room are separated by a minimum of a 1-foot vertical and horizontal separation. Although the cable separation criterion for the relay room is not as conservative as

would be required in today's construction permit application, we conclude that the health and safety of the public has not been significantly compromised because of the following design considerations that compensate for the lesser separation distance:

a. All non-metallic materials in the cable construction and accessory devices will not support combustion. Also the room's finish and structural materials were selected on the basis of their fire-resistant characteristics.

b. There are no cables in the relay room that operate at more than 140 volts. Also, circuit protection from overload and short circuit is provided to minimize the fire hazard due to electrical faults.

c. Cable tray fill will be restricted to 40% of tray cross sectional area.

d. The supports for the cable trays are designed for 100% loading plus seismic forces.

- Cable trays are routed to avoid a fire hazard area. Where this cannot be done the cable tray system is protected by fire resisting barriers. Also, where possible a wall or floor has been provided between trays carrying redundant safety circuits. This criterion would be acceptable for present PSAR applications.

- Barriers are provided where mutually redundant trays cross. They will be protected by a distance equal to approximately three times the widest of the two trays. This criterion would be acceptable for present PSAR applications.

- Non-safety related cables, although permitted to be routed with one safety load group, will not be permitted to cross over to another group. This criterion would be acceptable for present PSAR applications.

- When wiring for redundant engineered safety features is within a single panel, the wiring is separated by at least 6 inches of air space or a

fireproof barrier. Further, compliance by the applicant with the criteria for protection against breaks or leaks in lines carrying high energy fluid (see staff testimony in response to contention 3.13.2.1) will assure that these cables are adequately protected.

Dominic Tondi

Subscribed to and sworn before
me this 5th day of February, 1973

Notary Public

My Commission expires 7/1/76