



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

October 27, 1978

NRC PUBLIC DOCUMENT ROOM

Charles Bechhoefer, Esq., Chairman
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dr. George C. Anderson
Department of Oceanography
University of Washington
Seattle, Washington 98195

Mr. Ralph S. Decker
Route 4, Box 190D
Cambridge, MD 21613

In the Matter of
Dairyland Power Cooperative
(La Crosse Boiling Water Reactor)
(SFP License Amendment)
Docket No. 50-409



Gentlemen:

Enclosed is a memorandum from the Director of Nuclear Reactor Regulation to the Commissioners discussing the results of a recent fire protection research test by the Underwriters Laboratory for the Commission. We have been instructed to forward this information to all Boards.

The Staff has received the Fire Hazards Analysis for LACBWR and has determined that the UL test results are not applicable to LACBWR since neither the mineral wool blanket type insulation nor the particular cable configuration of the test are in use there.

Sincerely,

Colleen P. Woodhead
Colleen P. Woodhead
Counsel for NRC Staff

Enclosure
As Stated

cc w/encl: George R. Nygaard
Mark Burmaster
Anne K. Morse
John P. Madgett
O. S. Heistand, Esq.
George L. Edgar, Esq.
Fritz Schubert, Esq.
Mr. Samuel J. Chilk
Atomic Safety and Licensing Board Panel
Atomic Safety and Licensing Appeal Board
Docketing and Service Section

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WASHINGTON, D. C. 20555

September 29, 1978

MEMORANDUM FOR: Chairman Hendrie
Commissioner Gilinsky
Commissioner Kennedy
Commissioner Bradford
Commissioner Ahearne

THRU: *F* Executive Director for Operations

FROM: Harold R. Denton, Director
Office of Nuclear Reactor Regulation

SUBJECT: NRC FIRE PROTECTION RESEARCH TEST

W. J. Denton

On September 15, 1978, a fire test of a full-scale vertical cable tray array was conducted at the Underwriters' Laboratory near Chicago, Illinois. It was part of the NRC-expedited fire protection research program requested in the Commission's Order of April 13, 1978. The purpose of the test was to demonstrate the effectiveness of area sprinklers and mineral wool blanket type cable tray fire barriers in preventing damage to cables as a result of an exposure fire created by igniting two gallons of heptane.

The configuration of cables and fire protection features in the test did not simulate any particular nuclear power plant. There are plants in operation and under construction for which the electrical cable tray configuration of the test was typical. However, based on the staff's ongoing fire protection reviews, we know of no operating plants with the configuration of fire protection features used in the test, although features of this type have been proposed for installation and are currently under review by the staff.

The test resulted in damage to some of the electrical cables. Preliminary analysis (see Enclosure 1) indicates that the configuration of fire protection features used in the test would not be acceptable for application in nuclear power plants. In particular, it appears that fire barriers for vertical trays in some configurations may need to be designed to prevent entry of flammable fluids. A wick effect may also need to be considered in the design of fire barriers. The response of the fusible link sprinklers used in the test is also under further study.

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The test results are still being analyzed and it would be premature to establish firm conclusions at this time; however, the results now available suggest that modifications to certain of the staff's fire protection criteria may be necessary. The staff is continuing its review and will meet with the test contractors (Sandia and UL) on October 3, 1978 to further study the preliminary findings and results. A quick look report is expected to be completed by UL within the next several days and will be issued by Sandia shortly thereafter. The schedule and nature of further testing under this program are under review.

We will keep the Commission informed of significant results and possible impacts on operating reactors as information becomes available. A circular or bulletin will be issued by IE to inform licensees of the results of the test. Its preparation will follow the October 3 meeting with the contractors. Plants currently in operation remain subject to administrative procedures aimed at minimizing the sources of ignition and continue to maintain manual fire fighting capability.

We will inform the Commission of any action deemed necessary as a result of our continuing review of the test results. The public announcement provided in Enclosure 2 is planned for release by the Office of Public Affairs on October 2. We are in the process of informing the ACRS and Hearing Boards where this information is relevant. -

Harold R. Denton

Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Enclosures:

1. Preliminary Analyses
2. Public Announcement

cc: (w/encls.)
Union of Concerned Scientists
Office of the Secretary
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