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NORTHERN STATES POWER COMPANY

MINNEAPOLIS, MINNESOTA 55401

October 22, 1979

Director of Nuclear Reactor Regulation
U S Nuclear Regulatory Commission
Washington, DC 20555

PRAIRIE ISLAND NUCLEAR GENERATING PLANT
Docket No. 50-282 License No. DPR-42
50-306 DPR-60

Fire Protection Safe Shutdown Reanalysis

Attached for your review is a revised fire protection safe shutdown analysis for the Prairie Island Nuclear Generating Plant. This report supersedes Section 7 of our Fire Hazards Analysis report dated March 11, 1977 and the Fire Hazards Analysis Supplement dated July 5, 1977.

The attached reanalysis satisfies the requirements of Section 3.2.1 of the NRC Fire Protection Safety Evaluation for the Prairie Island Nuclear Generating Plant dated September 6, 1979.

This report summarizes the results of a thorough reanalysis of fire areas containing equipment and cable required to safely shut down the plant. This reanalysis consisted of a complete tracing of all cables and equipment required for hot and cold shutdown using on-site power. This reanalysis has shown that the following modifications are needed to satisfy current NRC Staff criteria for safe shutdown:

a. Provide independent indication at the hot shutdown panels or at another panel of steam generator level, reactor coolant pressure and temperature, and pressurizer level.

b. Provide a fire retardant blanket in safeguards trays which cross underneath other safeguards trays in fire areas 58, 59, 73, and 74.

c. Provide additional protection for cable 25406-1 which passes through one corner of fire area 18.

These modifications, along with others identified in the NRC Fire Protection Safety Evaluation for the Prairie Island Nuclear Generating Plant, provide additional assurance that the plant can be safely shut down in the event of any postulated fire. They will be scheduled for completion by October 31, 1980.

We have also examined the effects of a relay room fire on the control circuits, which may be susceptible to spurious operations, for the main steam isolation valves, feedwater isolation valves, and coincidental spurious operation of the pressurizer power operated reliefs with the inoperability of their motorized isolation valves. In the event spurious operations cause any of these valves to malfunction, corrective action can be taken to remedy the situation by use of temporary jumpers or by venting air from the normally closed valves. The means to accomplish this will be described in a procedure which will be prepared to cover this situation. This procedure will be scheduled for completion by October 31, 1980.

Two sets of cable tray drawings showing safe shutdown cable routing for use in conjunction with the attached report are being sent in separate correspondence. We ask that these drawings not be made available for inspection and not be placed in the public document room pursuant to Section 2.790(d) of 10 CFR Part 2.

Plese contact us if you have any questions related to this report.

L. O. Mayer

L O Mayer, PE
Manager of Nuclear Support Services

LOM/DMM/ak

cc: J G Keppler
G Charnoff

Attachment