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ACCESSION NBR:8008120187 DOC.DATE: 80/08/05 NOTARIZED: NO DOCKET #
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SUBJECT: Submits addl info required by fire protection safety evaluation for remaining open Items 3.1.8.(2) re fire barrier around Div II cable trays,Section 3.1.8(4) re load ctr fire walls & Section 3.1.9 re cables.

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NSP

NORTHERN STATES POWER COMPANY

MINNEAPOLIS, MINNESOTA 55401

August 5, 1980

Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

MONTICELLO NUCLEAR GENERATING PLANT
Docket No. 50-263 License No. DPR-22

Design Information Required
By Fire Protection Safety Evaluation

The Commission issued the Fire Protection Safety Evaluation Report (SER) for the Monticello Nuclear Generating Plant on August 29, 1979. Section 3.1 of the SER requires the submittal of additional information for certain identified items. The purpose of this letter is to provide the Staff with the required information on the remaining open items.

SER Item 3.1.8(2) - 1/2 Hour Fire Barrier Around Division II Cable Trays

The concern with this item is that hot gases generated by a postulated turbine lube oil reservoir fire could damage Division II cabling. This barrier in conjunction with the proposed sprinkler curtain identified in SER Item 3.1.2(3) would have provided adequate protection for these cables.

Several different types of fire barriers have been evaluated by NSP's consultant, the San Francisco Power Division of Bechtel Corporation. Installation of a fire barrier around these cable trays is undesirable for the following reasons:

1) High ampacity of one of the effected cable trays makes overheating of cables a problem with a "wrap around" barrier such as Kaowool.

2) Numerous interferences and ventilation problems make other fire barrier designs excessively difficult to install.

3) Installation of a fire barrier around these trays would restrict access to them both for maintenance and manual fire suppression.

In lieu of the actions specified in SER Items 3.1.2(3), Sprinkler Curtain, and 3.1.8(2), 1/2 Hour Fire Barrier, NSP proposes to install a 2-hour rated fire wall around the opening in the floor communicating with the turbine

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lube oil reservoir area. This will prevent all hot gases from entering the water treatment and ESF motor control center area with its associated Division II cabling. The wall will also prevent line-of-sight projection of radiant heat on these cables.

The fire wall to be installed will be similar in design to Underwriters Laboratories, Fire Resistance Directory, January 1978 edition, Design No. U303. The wall will be provided with fire dampers to facilitate normal ventilation from the water treatment and ESF motor control center area to the turbine operating floor. These 1-1/2 hour rated fire dampers would close in the event of a turbine lube oil reservoir fire. This wall will provide more effective protection for the referenced Division II cables than would have been provided by SER Items 3.1.2(3) and 3.1.8(2). NSP no longer plans to make the modification described in item 3.1.2(3) or 3.1.8(2).

SER Item 3.1.8(4) - 4.16 KV Load Center Fire Walls

A fire wall will be installed on the 911' elevation of the turbine building to separate the ESF motor control center located in fire zone 12-A from the hydrogen seal oil unit located in fire zone 12-B. In addition, a fire wall will be installed on the 931' elevation of the turbine building to separate the ESF motor control center located in fire zone 14-A from any hot gases, generated by a hydrogen seal oil unit fire, which could be present in fire zone 14-B.

Both of these walls will be seismically rated due to their proximity to the ESF motor control centers. The fire walls will be constructed of an I-beam framework covered on the hydrogen seal oil unit side of the wall with an approximate 2 inch thick coating of Pyrocrete 241. This will give these walls a three hour fire resistance rating from the effects of a hydrogen seal oil unit fire.

SER Item 3.1.9 - Cables

Modifications will be performed to provide separation between the cables and equipment required for remote manual operation of the RCIC and HPCI systems. In the case of both HPCI and RCIC the cables and equipment required for remote manual operation have been defined by NSP to include all those required for total system operability with the following two exceptions:

a) Those involved with bringing system initiation signals to the initiating relays.

b) Those involved with providing annunciation at certain levels of a parameter for which indication is provided.

Note that, regarding item a), the initiating relays themselves and the cables from the relay contacts to other system components will be relocated.

In the majority of cases where a fire zone contains cables and/or equipment for both systems, relocation of RCIC will be preferred. However, there will be cases where relocation of HPCI may be performed, as in a case where a fire zone may contain much less HPCI equipment and cable than RCIC.

Modifications will be performed to provide separation between the cables supplying 125 V DC power to the diesel generator control cabinets. One cable is associated with each division and one division will be rerouted.

Modifications will be performed to provide separation between cables associated with an automatic start of the ESW pumps on EDG starting. Two cables are associated with each division and one division will be rerouted.

Please contact us if you require additional information related to any of these modifications.

L. O. Mayer

L. O. Mayer, PE
Manager of Nuclear Support Services

cc: J. G. Keppler
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