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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

MONTICELLO NUCLEAR GENERATING PLANT

NORTHERN STATES POWER COMPANY

CONFIRM ADEQUACY OF SPACE COOLING FOR HIGH-PRESSURE COOLANT INJECTION AND REACTOR CORE ISOLATION COOLING SYSTEM

STAFF POSITION

II.K.3.24 (NUREG-0737) Confirm Adequacy of Space Cooling for High-Pressure Coolant Injection (HPCI) and Reactor Core Isolation Cooling (RCIC) Systems

Long term operation of the reactor core isolation cooling (RCIC) and high-pressure coolant injection (HPCI) system may require space cooling to maintain the pump-room temperatures within allowable limits. Licensees should verify the acceptability of the consequences of a complete loss of alternating current (AC) power. The RCIC and HPCI systems should be designed to withstand a complete loss of offsite AC power to their support systems, including coolers for at least two hours.

EVALUATION

By letter dated December 31, 1981, the licensee provided a description of the HPCI and RCIC equipment area cooling which is available in the event of a complete loss of offsite power. The HPCI area cooling is provided by two air cooling units with each cooling unit powered by a separate emergency power source. The cooling units are supplied with cooling water from the emergency service water system which is also powered from emergency power sources. The RCIC area cooling is provided by one air cooling unit which is powered by an emergency power source. However, the cooling water supply is unavailable with a loss of offsite power. The licensee has analyzed the consequences of a complete loss of offsite power on the environment of the RCIC area. The results of the analysis indicated that the ambient air temperature of the RCIC area does not exceed the RCIC equipment environmental limits assuming a complete loss of power for 72 hours. Since the HPCI and RCIC for the Monticello Plant, including their support systems and space cooling will not be affected by a loss of offsite power for at least two hours, we conclude that the requirements of TMI Task Action Plan, NUREG-0737, Item II.K.3.24 are satisfied.

Principal Contributor: R. Emch, N. Fioravante