



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 140 TO FACILITY OPERATING LICENSE NPF-9
AND AMENDMENT NO. 122 TO FACILITY OPERATING LICENSE NPF-17
DUKE POWER COMPANY
MCGUIRE NUCLEAR STATION, UNITS 1 AND 2
DOCKET NOS. 50-369 AND 50-370

1.0 INTRODUCTION

By letter dated November 4, 1993, Duke Power Company (the licensee) submitted a request for changes to the McGuire Nuclear Station, Units 1 and 2, Technical Specifications (TS). The requested changes would provide a one-time extension of the allowed outage time for each of the two trains of the Control Area Ventilation (VC) System to facilitate maintenance on the system that is needed to improve system reliability. The VC system provides filtration and cooling for the control room. McGuire TS 3.7.6 requires both independent VC Systems to be operable in all modes. With one VC System inoperable during Modes 1, 2, 3 or 4, the TS requires the operators to restore the inoperable system to operable status within 7 days or both McGuire Units are to be in at least Hot Standby within the next 6 hours and in Cold Shutdown within the following 30 hours. Similarly, with one VC System inoperable during Modes 5 or 6, the operator is to restore the inoperable system to operable status within 7 days or initiate and maintain operation of the remaining operable VC System in the recirculation mode. The proposed change would add a footnote to TS 3.7.6, referenced after the specified 7 days, to state that a one-time extension of the allowed outage time to 14 days is granted for each train, one at a time, to allow major maintenance on certain system components.

2.0 EVALUATION

The proposed major maintenance is on the chiller for each train of the VC system and will include chiller transmission rebuilding, replacement of motor bearing and replacement of the windage baffle (a vendor recommendation). The licensee stated that the VC system has been in service for more than 12 years and has reached a point that requires this major maintenance.

The licensee states that estimates for the planned maintenance indicate that the allowed TS outage time of 7 days is insufficient to complete the maintenance. The licensee believes that 14 days will be sufficient to complete the maintenance activities and will take steps to reduce that time as much as possible. Some of the methods to reduce the downtime include continued planning, training on "mock-ups," prefabrication and organization of parts and components. Also, the licensee plans to do this system maintenance during the colder months of the year (February-March 1994) to allow for more control room cooling through the outside air intake. This reduces the operational load on the remaining operating chiller, thus, providing additional assurance that the system remains operable.

The specific function of the filter train fans is to maintain, in a radiological emergency, such as in a core melt accident, a positive pressure in the common control room to prevent in-leakage of potentially contaminated (unfiltered) air and to provide for the flow of outside air (required for pressurization) through the control room area filter package. Another function of the VC system is to prevent in-leakage of toxic gas in the event of a toxic gas spill.

For a radiological emergency that would represent a significant radioactive release requiring use of the filter train of the VC system, multiple safety system (Emergency Core Cooling System, operable VC system, Containment system) failures would have to occur. Such a total failure during the additional 7 days of requested allowed outage time is not considered a credible event.

The licensee notes that gaseous chlorine is the only toxic gas normally onsite that may be drawn into the VC intake. The VC outside air intake has chlorine sensors which automatically isolate the affected intake upon detection of chlorine. These sensors are train-related and having one train down for an extended period of time will not affect the ability of the other train to isolate on chlorine detection. The licensee stated that, as an additional precaution to further minimize the probability of a chlorine release from the only potential source at the site (approximately 2 150-pound bottles), the transport of chlorine on-site will be prohibited during the system modification.

Furthermore, air mask and self-contained breathing apparatus and thyroid dose blocking potassium iodide pills are readily available to the control room operators in the unlikely event that they are needed to protect the operators in a radiological or toxic gas emergency.

The staff has reviewed the licensee's submittal and, based on this review, has determined that the proposed maintenance to the design of the VC system will result in an improvement in the reliability of the system and, therefore, an improvement in safety. The staff further finds that the risks associated with implementing the maintenance are negligible. Therefore, the proposed change to the TS is acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the North Carolina State official was notified of the proposed issuance of the amendments. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no

significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (58 FR 62155 dated November 24, 1993). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

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Date: February 10, 1994