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TECHNICAL EVALUATION OF THE RESPONSE TO POSITION NO.5 OF ITEM II.E. 4.2 OF NUREG-0737 CONTAINMENT ISOLATION SETPOINT FOR THE FORT CALHOUN NUCLEAR POWER PLANT

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by

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INTRODUCTION AND BACKGROUND

As a consequence of the incident at TMI-2, implementation of a number of new requirements has been recommended for operating reactors. These new requirements are described in NUREG-0660, "NRC Action Plan Developed as a Result of the TMI-2 Accident," May 1980, and NUREG-0737, "Clarification of TMI Action Plan Requirements," November 1980. The NRC staff has also requested licensees to submit information sufficient to permit an independent evaluation of their response to these new requirements. This report provides an evaluation of the response to Action Plan Item II.E.4.2, position 5, by the designated licensee.

DESIGN BASIS OR REVIEW CRITERIA

Position 5 requires that the containment pressure setpoint that initiates containment isolation for non-essential system containment vessel penetrations be at, or reduced to, "...the minimum compatible with normal operating conditions."

TECHNICAL EVALUATION

Response evaluation is based upon the values provided for the following parameters:

(1) The maximum observed or expected containment pressure during normal operation.

(2) The loop error and observed drift in the pressure sensing instrumentation providing the isolation signal (see note).

(3) The containment isolation pressure setpoint.

NOTE: The clarification document (NUREG-0737) provided only the expected margin for instrument error and did not specify acceptable values for instrument drift or atmospheric changes contributing to the total sensing loop error. Additional staff guidance established a limit of 3.0 psi for an isolation setpoint margin over the normal containment pressure to account for total loop error. In addition, for subatmospheric containments, a 3.0 psi setpoint margin over atmospheric pressure is also considered acceptable.

In consideration of these values, the isolation pressure setpoint is to be as low as practical without increasing the probability of inadvertent activation of the isolation signal.

CONCLUSIONS

The letter of December 31, 1980, submitted by Omaha Public Power District, provided sufficient information to conclude that the containment isolation pressure setpoint for Fort Calhoun Nuclear Power Plant meets the NUREG-0660/0737 requirements and is within the additional limiting guidelines provided by the NRC staff.

CONTAINMENT SYSTEMS

LIMITING CONDITION FOR OPERATION

3.6.1.7 The containment purge supply and exhaust isolation valves may be open for safety-related reasons [or shall be locked closed]. The containment vent line isolation valves may be open for safety-related reasons [or shall be locked closed].

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:
(For plants with valves closed by tecnnical specification)

With one containment purge supply and/or one exhaust isolation valve open, close the open valve(s) within one hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

(For plants with valves that may be opened by technical specifications)

1. With one containment purge supply and/or one exhaust isolation or vent valve inoperable, close the associated OPERABLE valve and either restore the inoperable valve to OPERABLE status within 72 hours or lock the OPERABLE valve closed.

2. Operation may then continue until performance of the next required valve test provided that the OPERABLE valve is verified to be locked closed at least once per 31 days.

3. Otherwise, be in at least HOT STANDBY within the next six hours and in COLD SHUTDOWN within the following 30 hours.

4. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.6.1.7.1 The __ -inch containment purge supply and exhaust isolation valves and the __ -inch vent line isolation valves shall be determined locked closed at least once per 31 days.

4.6.1.7.2 The valve seals of the purge supply and exhaust isolation valves and the vent line isolation valves shall be replaced at least one per __ years.