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Nuclear Operations

November 14, 1991
NRC-91-0151

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

References: 1) Fermi 2
NRC Docket No. 50-341
NRC License No. NPF-43

2) Detroit Edison letter to NRC, NRC-89-0215, dated November 16, 1989

3) Detroit Edison letter to NRC, NRC-90-0150, dated September 11, 1990

Subject: Supplemental Information Concerning Proposed Technical Specification Change for Control Room Emergency Filtration System Duct In-leakage Testing

In Reference 2, Detroit Edison proposed changes to the Fermi 2 Operating License and Technical Specifications to incorporate a testing and inspection program to assure the integrity of those portions of the Control Room Emergency Filtration System (CREFS) external to the Control Room. The purpose of this letter is to submit supplemental information and modified Technical Specifications concerning the proposed duct in-leakage testing and inspection program.

The enclosed supplemental information and modified Technical Specifications involve two items. The first is the proposed duct leak testing standard, which is being updated to a more recent standard. The second is the scope of the proposed annual visual inspection, which is being expanded to include additional areas of the duct. These two items were discussed in a recent NRC staff visit to Fermi 2 for the purpose of reviewing pending CREFS licensing actions.

If you have any questions on this matter please contact Mr. Glen D. Ohlemacher at (313) 586-4275.

Sincerely,

Enclosure

cc: A. B. Davis
R. W. DeFayette
J. F. Stang
S. Stasek
Supervisor, Electric Operators - Michigan
Public Service Commission - J. R. Padgett

I, WILLIAM S. ORSER, do hereby affirm that the foregoing statements are based on facts and circumstances which are true and accurate to the best of my knowledge and belief.

William S. Orser
WILLIAM S. ORSER
Senior Vice President

On this 14th day of November, 1991, before me personally appeared William S. Orser, being first duly sworn and says that he executed the foregoing as his free act and deed.

Rosalie G. Arretta
Notary Public

ROSALIE A. ARRETTA
Notary Public, Macomb County, MI
My Commission Expires Jan. 11, 1992

Supplemental Information Concerning Proposed Technical Specification Change for Control Room Emergency Filtration System Duct In-leakage Testing

I. Introduction

In Reference 2, Detroit Edison submitted a proposal to incorporate a testing and inspection program to assure the integrity of those portions of the Control Room Emergency Filtration System (CREFS) external to the Control Room. The Reference 2 proposal was submitted in response to Fermi 2 Operating License Condition 2.C(7).

The underlying concern being addressed is that of potential unfiltered in-leakage into the duct external to the Control Room which may be at negative pressure during accident conditions. The duct joints have been treated with a silicone sealant and the ability to perform its function over the full plant life is in question.

The Reference 2 proposal addressed this concern by proposing Technical Specifications (TS) to require an annual visual inspection and a 36-month leakage test of the duct in question. The duct would thus be monitored in two ways for unexpected degradation.

On October 21 through 25, 1991, NRC staff members visited Fermi 2 to review pending licensing actions concerning the CREFS. Based on this visit, Detroit Edison is modifying the Reference 2 proposed TS in two areas.

The first change is that the duct in-leakage testing standard specified in proposed surveillance 4.7.2.1.h is being updated by specifying ASME N510-1989 in place of the currently proposed standard, ANSI N510-1980. In addition, minor changes are made to be consistent with the new standard and provisions are made to accept previously performed testing done in accordance with the 1980 standard.

The second change is that the scope of the visual inspection of proposed TS 4.7.2.2 is expanded to include two more sections of CREFS duct. This duct is external to the Control Room and is subject to negative pressure during accident conditions. However, any in-leakage into these ducts would be filtered prior to entry into the control room.

The revised Operating License and TS pages are attached. These TS pages also reflect the changes proposed by Reference 3. The Reference 3 TS changes also affect these pages although the proposals are otherwise independent of each other. In order to allow sufficient time to make the necessary procedure changes, it is requested that the proposed TS be issued with a 30 day implementation period.

II. Duct In-leakage Testing Standards

The testing standard for duct leak testing is being updated to the ASME N510-1989 standard. As before, the in-leakage at both the normal operating pressure and at a pressure corresponding to operation with a damper failure will be determined. The new standard makes minor improvements to the test methodologies specified therein. Since this standard represents the latest accepted standard for this activity, Detroit Edison is including it in these proposed TS.

Updating the standard requires that the proposed TS address previously performed testing. During the second refueling outage, Detroit Edison successfully completed the currently proposed duct leak test requirement, which specifies ANSI N510-1980. The results of these tests provide an acceptable measure of duct integrity. A footnote has been included to provide that these tests satisfy the new surveillance requirement until the next required performance of the test. Without this provision, the plant would be in noncompliance with the new surveillance requirement at the time of implementation of this proposal.

The proposed TS is also being modified to eliminate the term "test pressure". In ASME N510-1989 and its associated design standard, ASME N509-1989, the term "test pressure" is used to describe a test condition where the pressure equals or exceeds the pressure for which the leakage is being determined. When a difference exists, equations provided by the standards are utilized to determine the leakage at the pressure of interest. In order to avoid confusion as to the intent of the test, the terminology is being modified to clearly indicate that the requirement is to determine the leakage at the specified pressure.

III. Visual Inspection Scope

The visual inspection requirement of proposed TS 4.7.2.2 is being changed to include two additional sections of duct. These sections are the portion of the emergency intake duct between the emergency make-up filter outlet and the emergency recirculation filter inlet and the portion of the emergency recirculation duct from the Control Center envelope to the emergency recirculation filter inlet.

This duct is outside the Control Center envelope and subject to negative pressure during accident conditions. However, any in-leakage would be treated by the emergency recirculation filter. The in-leakage would not be treated by the emergency make-up filter and thus does not receive the same degree of filtration which is normally given previously unfiltered air entering the CREFS during emergency operation. However, due to the small fraction of the total make-up air flow which the in-leakage represents and the filtration received from the recirculation filter, the impact of this in-leakage is insignificant. To provide assurance that any potential degradation of

the silicone sealant does not invalidate this conclusion, these ducts are being included in the annual visual inspection. If degradation were to be observed, the TS will require that the intended course of action be promptly addressed in a special report.

These ducts are also located in the same environment as the four ducts already included in the testing and inspection program. Including the ducts gives a greater base of information for detecting any abnormal degradation of the sealant.

IV. No Significant Hazards Consideration

Detroit Edison has reviewed the no significant hazards consideration analysis of Reference 2. These changes do not represent a change in the basic approach taken in Reference 2 to assure the integrity of the CREFS duct external to the control room. For this reason, the Reference 2 no significant hazards analysis has been determined to remain valid for the proposal as modified herein.