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Nuclear
Operations

January 30, 1992
NRC-91-0164

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-91-0039,
dated March 18, 1991

Subject: Proposed Technical Specification Change
(License Amendment) - Reactor Coolant System
Pressure Isolation Valves

Pursuant to 10CFR50.96, Detroit Edison Company hereby proposes to amend Operating License NPF-43 for the Fermi 2 plant by incorporating the enclosed changes into the Plant Technical Specifications. The proposed change eliminates two valves from the listing of Reactor Coolant System Pressure Isolation Valves in Technical Specification (TS) Tables 3.4.3.2-1 and 3.4.3.2-2. A design change has eliminated the connection between these valves and the Reactor Coolant System.

The elimination of these two valves from these TS tables consequently eliminates associated testing requirements. These tests will have to be performed during Fermi 2's third refueling outage, scheduled for September 1992, unless this proposal is approved. The elimination of these unnecessary testing requirements will reduce radiation exposure to testing personnel. Accordingly, prompt approval is requested in order to remove this unnecessary testing from the outage scope.

Detroit Edison has evaluated the proposed Technical Specifications against the criteria of 10CFR50.92 and determined that no significant hazards consideration is involved. The Fermi 2 Onsite Review Organization has approved and the Nuclear Safety Review Group has reviewed the proposed Technical Specifications and concurs with the enclosed determinations. In accordance with 10CFR50.91, Detroit Edison has provided a copy of this letter to the State of Michigan.

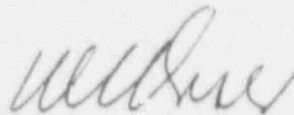
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If you have any questions, please contact Mr. Glen D. Ohlemacher at
(313) 580-4275.

Sincerely,



Enclosure

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

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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 30th day of January, 1992, 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 A. Armetta
Notary Public

ROSALIE A. ARMETTA
NOTARY PUBLIC STATE OF MICHIGAN
MONROE COUNTY
MY COMMISSION EXP. NOV. 20, 1995

INTRODUCTION

This proposal amends the Fermi 2 Technical Specifications (TS) by eliminating two valves from TS Tables 3.4.3.2-1, Reactor Coolant System Pressure Isolation Valves, and 3.4.3.2-2, Reactor Coolant System Interface Valves Leakage Pressure Monitors. The two valves are the Reactor Pressure Vessel (RPV) Head Spray isolation valves. Valve E11-F022 is the inboard valve and valve E11-F023 is the outboard valve.

The RPV Head Spray line was permanently disconnected from the Reactor Coolant System (RCS) by a design change. The isolation valves no longer act as RCS Pressure Isolation Valves and are accordingly being proposed to be eliminated from the TS listing of RCS Pressure Isolation Valves.

EVALUATION

The proposal eliminates the RPV Head Spray Inboard Isolation Valve, E11-F022, and the RPV Head Spray Outboard Isolation Valve, E11-F023, from TS Tables 3.4.3.2-1, Reactor Coolant System Pressure Isolation Valves, and 3.4.3.2-2, Reactor Coolant System Interface Valves Leakage Pressure Monitors. Through a design change the RPV head spray line has been permanently disconnected from the RPV and is, therefore, no longer required to perform any RCS pressure isolation function.

The RPV head spray feature was an operating mode for the Residual Heat Removal (RHR) System associated with the RHR shutdown cooling mode. When RHR is operating in the shutdown cooling mode, reactor coolant is returned to the RPV through a recirculation system loop, or with head spray installed, part of the flow could be diverted to a spray nozzle in the RPV head. The intent of the head spray feature was to maintain saturated conditions in the RPV head volume by condensing steam being generated by the hot RPV walls and internals and to decrease thermal stratification in the RPV coolant during shutdown cooling. However, operating experience has shown that RPV differential temperature limits can be met as long as the Technical Specification allowable cooldown rate for the reactor coolant is not exceeded while in shutdown cooling. Consequently, head spray was not needed nor was it used.

The RHR head spray mode performed no safety-related functions. The safety analysis did not take credit for this mode of RHR in mitigating the consequences of an accident or malfunction and it was not required for the safe shutdown of the plant. Because head spray was not required for its intended function nor any safety function, a design change (EDP 9979) was made to disconnect the head spray line from the

RPV head spray nozzle. This change reduces the thermal duty on the RPV.

The design change was evaluated and completed under the provisions of 10CFR50.59. The change was incorporated into Revision 4 of the UFSAR which was submitted, along with a summary of the associated safety evaluation (SE No. 89-0077), by Reference 2.

The two isolation valves, E11-F022 and E11-F023, remain installed and continue to perform a primary containment isolation function. As such, the valves are listed in TS Table 3.6.3-1, Primary Containment Isolation Valves, and are subject to the associated requirements. However, due to the design change, the valves do not perform a RCS pressure isolation function and should not be contained in the TS listing of RCS pressure isolation valves.

When listed in the TS as RCS pressure isolation valves, the valves are subject to the more stringent action and surveillance requirements of TS 3/4.4.3.2, Operational Leakage. Eliminating these now unnecessary requirements reduces radiation exposure to testing personnel and allows testing personnel to concentrate on more important tasks.

SIGNIFICANT HAZARDS CONSIDERATION

In accordance with 10CFR50.92, Detroit Edison has made a determination that the proposed amendment involves no significant hazards considerations. To make this determination, Detroit Edison must establish that operation in accordance with the proposed amendment would not: 1) involve a significant increase in the probability or consequences of an accident previously evaluated, or 2) create the possibility of a new or different kind of accident from any accident previously evaluated, or 3) involve a significant reduction in a margin of safety.

The proposed change eliminates the Reactor Pressure Vessel (RPV) Head Spray Inboard and Outboard Isolation Valves from Technical Specification Tables 3.4.3.2-1, Reactor Coolant System (RCS) Pressure Isolation Valves, and 3.4.3.2-2, Reactor Coolant System Interface Valves Leakage Pressure Monitors. Through a design change the RPV head spray line has been permanently disconnected from the RPV. The change does not:

- 1) Involve a significant increase in the probability or consequences of an accident previously evaluated. The change eliminates two valves from the TS listing of RCS pressure isolation valves because the valves no longer perform a RCS pressure isolation function. Eliminating requirements associated solely with this

function has no effect on either the probability or consequences of any previously evaluated accidents.

- 2) Create the possibility of a new or different kind of accident from any accident previously evaluated. The change eliminates testing and action requirements associated with the RCS pressure isolation function, which is no longer performed by these two valves. In so doing, the change creates no new operating modes or accident initiating mechanisms.
- 3) Involve a significant reduction in a margin of safety. The elimination of these unnecessary requirements does not impact any safety margins. The leakage through these valves has no meaning in regards to RCS leakage and the associated action requirements for RCS leakage are similarly not meaningful.

Based on the above, Detroit Edison has determined that the proposed amendment does not involve a significant hazards consideration.

ENVIRONMENTAL IMPACT

Detroit Edison has reviewed the proposed Technical Specification changes against the criteria of 10CFR51.22 for environmental considerations. The proposed change does not involve a significant hazards consideration, nor significantly change the types or significantly increase the amounts of effluents that may be released offsite, nor significantly increase individual or cumulative occupational radiation exposures. Based on the foregoing, Detroit Edison concludes that the proposed Technical Specifications do meet the criteria given in 10CFR51.22(c)(9) for a categorical exclusion from the requirements for an Environmental Impact Statement.

CONCLUSION

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

Testing requirements proposed herein to be eliminated will have to be performed during Fermi 2's third refueling outage, scheduled for September 1992, unless this proposal is approved. Accordingly, prompt approval is requested in order to eliminate this unnecessary testing from the outage scope. In order to allow time for the revision of site documents, a thirty day implementation period is requested for this proposal.