

B. Ralph Sylvia  
Group Vice President

**Detroit  
Edison**

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(313) 586-4150

January 15, 1988  
NRC-87-0272

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

Reference: Fermi 2  
NRC Docket No. 50-341  
NRC License No. NPF-43

Subject: Proposed Technical Specification Change (License  
Amendment) - Emergency Core Cooling Systems Shutdown  
(3/4.5.2)

Pursuant to 10CFR50.90, 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 allows the Low Pressure Coolant Injection (LPCI) system cross tie valve to be placed in the closed position during plant shutdowns.

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.

Pursuant to 10CFR170.12(c), enclosed with this amendment request is a check for one hundred fifty dollars (\$150.00). In accordance with 10CFR50.91, Detroit Edison has provided a copy of this letter to the State of Michigan.

Detroit Edison anticipates that the circumstances expected during the upcoming Local Leak Rate Test outage scheduled for March 1988 will require this amendment. Therefore, your prompt consideration of this proposal is requested.

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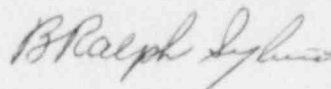
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If you have any questions, please contact Mr. Lewis P. Bregni at (313)  
586-4072.

Sincerely,

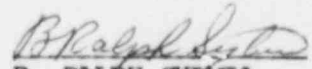
A handwritten signature in cursive script, appearing to read "B. Ralph Lyman".

Enclosure

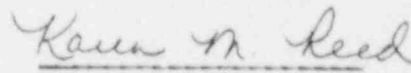
cc: Mr. A. B. Davis  
Mr. E. G. Greenman  
Mr. W. G. Rogers  
Mr. J. J. Stefano  
Supervisor, Advanced Planning and Review Section  
Michigan Public Service Commission

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I, B. RALPH SYLVIA, 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.

  
B. RALPH SYLVIA  
Group Vice President

On this Fifteenth day of January, 1988, before me personally appeared B. Ralph Sylvia, being first duly sworn and says that he executed the foregoing as his free act and deed.

  
Notary Public

KAREN M. REED  
Notary Public, Monroe County, Mich.  
My Commission Expires May 14, 1990

#### BACKGROUND/DISCUSSION

Fermi 2 Technical Specifications currently require the LPCI system cross-tie valve (E11-F010) to be open as a requirement for LPCI system operability in all operational conditions. During Operational Conditions 4 and 5 this requirement exists since the shutdown ECCS surveillance requirement (4.5.2.1) specifies the application of the ECCS surveillance requirement for Operational Conditions 1, 2 and 3 (4.5.1). Surveillance Requirement 4.5.1.a.2 specifies the cross-tie valve to be open. During Operational Conditions 4 and 5 closure of the cross-tie valve is necessary to isolate a LPCI subsystem for maintenance. The purpose of this change is to allow closure of the cross-tie valve while allowing the other LPCI subsystem to remain operable as long as it is capable of injection to the reactor vessel.

In Operational Conditions 1, 2 and 3, Technical Specification Table 3.3.3-1 - Emergency Core Cooling System Actuation Instrumentation requires the break detection instrumentation for the LPCI loop selection feature to be operable. In these operational conditions the entire LPCI system flow (from both subsystems) would be injected through the injection valves associated with the recirculation loop determined by the break detection logic as being an intact loop. For this to occur the cross-tie valve must be open. For this reason Action b.3 of Specification 3.5.1 and Surveillance Requirement 4.5.1.a.2 are included in Technical Specifications to ensure the cross-tie valve is open in Operational Conditions 1, 2 and 3.

The loop selection feature described above is only required to be operable in Operational Conditions 1, 2, and 3 as shown in Table 3.3.3-1. Thus, in Operational Conditions 4 and 5, it is only necessary that a LPCI subsystem be capable of vessel injection to fulfill its intended function. Temporary modifications to the loop selection logic may be required to ensure that the operable subsystem is capable of vessel injection. The loop selection logic temporary modifications would ensure that the desired injection path is selected for the operable subsystem.

Technical Specification 3.5.2 requires two of the possible four Core Spray or LPCI subsystems to be operable. This recognizes the reduced Emergency Core Cooling requirements of Operational Conditions 4 and 5 and the need to allow for maintenance outages on ECCS equipment. Further, a condition in which one LPCI subsystem is operable and the other inoperable for maintenance is intended to be allowed by Technical Specifications. The proposed change is necessary to allow required maintenance to the inoperable subsystem while ensuring the operable subsystem has the capability of vessel injection.

#### 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 has established 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.

1. The proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated. The change maintains the existing ECCS equipment requirement in cold shutdown conditions and solely allows alignment of LPCI subsystem to inject to the reactor vessel via an alternative flow path to allow closure of the LPCI cross-tie valve for maintenance. This alternative flow path is normally designed for full LPCI system flow during operating conditions when the path is selected by the LPCI loop selection logic. Thus, this change does not increase the probability or consequences of evaluated accidents.
2. The proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated. The proposed change solely alters the alignment of LPCI equipment which results in the same required flow capabilities for ECCS equipment in the event of a loss-of-coolant accident in cold shutdown conditions. No new accident modes are created.
3. The proposed changes do not involve a significant reduction in a margin of safety. The ECCS capability required in cold shutdown conditions remains unchanged resulting in an unchanged margin of safety.

#### ENVIRONMENTAL IMPACT

Detroit Edison has reviewed the proposed Technical Specification changes against the criteria of 10CFR51.22 for environmental considerations. As shown above, the proposed changes do 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 evaluations 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 the proposed amendment will not be inimical to the common defense and security or to the health and safety of the public.

In summary, the proposed amendment removes an unnecessary requirement to maintain the LPCI cross-tie valve open during cold shutdown conditions. While ensuring the remaining LPCI system subsystem is operable, it allows the LPCI cross-tie valve to be closed to facilitate maintenance in an inoperable LPCI system subsystem.