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March 10, 1988
NRC-87-0244

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 Equipment Cooling Water
System (3/4.7.1.2), Emergency Equipment Service
Water System (3/4.7.1.3) and Ultimate Heat Sink
(3/4.7.1.5)

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. In addition, an appropriate change to the bases is proposed. The proposed change provides clarification of the action requirements for an inoperable Emergency Equipment Cooling Water System subsystem, Emergency Cooling Service Water System subsystem, or Ultimate Heat Sink.

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.

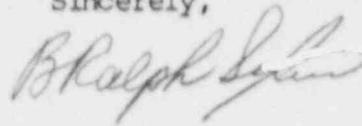
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If you have any questions, please contact Mr. Glen D. Ohlemacher at
(313) 586-4275.

Sincerely,

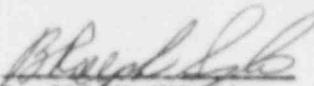


Enclosure

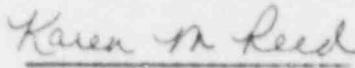
cc: A. B. Davis
E. G. Greenman
T. R. Quay
W. G. Rogers
Supervisor, Advanced Planning and Review Section,
Michigan Public Service Commission

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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 10th day of March, 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

The Limiting Conditions for Operation for Technical Specification 3/4.7.1.2 - Emergency Equipment Cooling Water System (EECW), 3/4.7.1.3 - Emergency Equipment Service Water System (EESW) and 3/4.7.1.5 - Ultimate Heat Sink currently provides ACTION requirements that are ambiguous in regard to when associated safety-related equipment is declared inoperable. The proposed change will clarify the ACTION requirements of the EECW and EESW systems and Ultimate Heat Sink to be consistent with the definition of OPERABILITY (Specification 1.25).

The configuration of safety-related cooling water systems at Fermi 2 is described in UFSAR Sections 9.2.2 and 9.2.5. An RHR reservoir acts as the ultimate heat sink for each division of cooling systems. Each RHR reservoir directly cools that division's RHR Service Water (RHRSW) system subsystem, EESW system subsystem and the service water subsystems for the division's 2 Emergency Diesel Generators (EDGs). The EESW system subsystem in turn directly cools the division's EECW system subsystem.

The ACTION requirements for Specifications 3.7.1.2 and 3.7.1.3 and ACTION requirement a. of Specification 3.7.1.5 are written such that the associated safety-related equipment is declared inoperable and the respective ACTION requirements are performed following the 72 hour period allowed to return the inoperable cooling subsystem (EECW/EESW subsystem or RHR reservoir) to an OPERABLE status. Detroit Edison believes, however, that it is prudent and consistent with the definition of OPERABILITY, as applied throughout the Technical Specifications, to declare the associated safety-related equipment inoperable at the time of discovery of the inoperable cooling subsystem.

Under the current Technical Specification 3/4.7.1.2, 3/4.7.1.3 and 3/4.7.1.5 declaring the associated safety-related equipment inoperable at the time of the discovery of the division's cooling subsystems being inoperable (one EECW/EESW system subsystem or RHR reservoir inoperable) requires the plant to comply with Specification 3.0.3 because the ACTION requirements in Specification 3.5.1 do not include provisions which address the combination of various inoperable Emergency Core Cooling System (ECCS) equipment. Compliance with Specification 3.0.3 would require an unnecessary plant shutdown without regard for the need of a reasonably determined allowable out-of-service time for one inoperable division of cooling subsystems. In the event of either division of cooling subsystems being inoperable, one Core Spray System subsystem and one Low Pressure Coolant Injection System subsystem becomes inoperable and, for

Division II, the High Pressure Coolant Injection system also becomes inoperable due to the lack of emergency cooling to the room in which the system equipment is located. As the EECW/EESW system and RHR reservoir cooling towers require periodic surveillance testing and preventive maintenance to attain the maximum possible availability and reliability, there are numerous times when one division is taken out-of-service and subsequently declared inoperable. Detroit Edison believes that when one of a division's cooling subsystems is declared inoperable, the associated safety-related equipment should be declared inoperable. However, the ACTION requirements of the Technical Specification were not intended to place the unit in Specification 3.0.3 in and of itself. Therefore, Detroit Edison proposes to:

- (A) Declare the associated safety-related equipment inoperable at the time of discovery of the inoperable EECW system subsystem and restore the inoperable system subsystem to an OPERABLE status within 72 hours. When the associated safety-related equipment is declared inoperable, providing the safety-related system is otherwise OPERABLE, the applicable ACTION statements of the safety-related equipment are not required to be taken.
- (B) Verify within 2 hours of declaring the EECW system subsystem inoperable that the Automatic Depressurization System (ADS) is OPERABLE and that all required safety-related equipment that depend on the remaining OPERABLE EECW system subsystem for cooling is also OPERABLE. The term "verify" as used in this context means to administratively check by examining logs or other information to determine if certain systems, subsystems, trains, and components are out-of-service for maintenance or other reasons. It does not mean to perform the surveillance requirements needed to demonstrate the OPERABILITY of the component. Additionally, to be consistent with Specification 3.5.1, the ADS is not required to be OPERABLE when reactor steam dome pressure is less than or equal to 150 psig.

The ACTION requirements for the inoperable cooling subsystems were not intended to place the unit in Specification 3.0.3 in and of itself. However, reliance on safety-related equipment serviced by a degraded cooling water system is not permitted. Therefore, Detroit Edison has proposed to implement additional requirements to declare the affected safety-related equipment inoperable and to verify the required safety-related equipment, that depend on the remaining OPERABLE division of cooling subsystems, OPERABLE. Providing that the safety-related systems are otherwise OPERABLE, the 72 hour ACTION time to restore the inoperable cooling subsystems to OPERABLE status is

appropriate and consistent with the results of the NRC sponsored mini-PRA performed by SAIC in December 1975, which is the present basis for the allowable out-of-service times in the existing Standard Technical Specifications.

If during the 72 hour allowable out-of-service time either Division (including degraded) of associated safety-related equipment serviced by the EECW systems become inoperable for reasons other than the inoperability of the EECW system, then this safety-related equipment is declared inoperable and the respective ACTION statements entered. Since no credit can be taken for those safety-related systems serviced by a degraded EECW system subsystem, then this inoperability may be beyond those conditions addressed or permitted by the affected safety-related equipment ACTION statements, and in those cases the provisions of Specification 3.0.3 shall be invoked.

As an example, should Division I EECW become inoperable, the applicable ACTION statements are entered and the safety-related equipment serviced by this cooling water system is declared inoperable. If during the 72 hour allowable out-of-service time it is determined that a Division II safety-related equipment is inoperable, then the affected Division II equipment is declared inoperable. The corresponding Division I equipment was earlier declared inoperable; however, ACTION requirements for degraded cooling of associated safety-related equipment was not taken. The applicable ACTION statements are now entered for the inoperability of the equipment with degraded cooling from Division I EECW and the inoperable Division II safety-related equipment. Should this result in a condition not addressed or permitted by the ACTION statements, the provisions of Specification 3.0.3 would be invoked.

Moreover, as a second example, should Division I EECW become inoperable, the applicable cooling water ACTION statements are entered and the safety-related equipment serviced by this cooling water system is declared inoperable. If during the 72 hour allowable out-of-service time it is determined that a Division I affected safety-related equipment is inoperable for reasons other than the inoperability of the EECW system subsystem, then the applicable ACTION statements are entered for the affected Division I equipment. Should this result in a condition not addressed or permitted by the ACTION statements, the provisions of Specification 3.0.3 would be invoked.

The current Technical Specifications for cooling water systems refer the operator to ACTION requirements entered due to the inoperability of systems directly cooled by the system covered by the Limiting Condition for Operation. Also, ACTION requirements entered due to inoperability of systems indirectly cooled by the system are referred

to. Detroit Edison believes that the operator should evaluate the impact of an inoperable cooling water system in a systematic manner based upon the plant configuration. The inoperable cooling system should be evaluated in terms of what directly cooled components are inoperable, which in turn should be evaluated as to the impact upon the operability of components or systems which they support. Detroit Edison proposes to structure the Technical Specifications for these interrelated cooling water systems to support this evaluation process. Proposed ACTION requirements for inoperable cooling water systems therefore include only references to ACTIONS for directly cooled components.

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 proposed change to the EECW/EESW system and Ultimate Heat Sink ACTION requirements do not create any new initiating mechanisms or affect any postulated initiating mechanisms for evaluated accidents. The proposed change ensures that sufficient safety-related equipment would be maintained and is available to initiate safe shutdown of the plant. In fact, the consequences of an accident may be decreased by implementing the compensatory actions and declaring the safety-related equipment inoperable at the time of discovery of an inoperable EECW system subsystem rather than 72 hours following the discovery as currently stated in the Technical Specifications. The proposed change also promotes safe plant operation by giving a reasonable out-of-service time for surveillance testing and preventive maintenance on the EECW/EESW and Ultimate Heat Sink systems without requiring unnecessary reactor shutdowns.
2. The proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated. The proposed changes to the EECW/EESW system and Ultimate Heat Sink ACTION requirements do not result in any

modifications to the plant or system operation and no safety-related equipment or function will be altered. As stated in (1) above, sufficient equipment would be maintained and is available to initiate safe shutdown of the plant. The requested changes do not create any new accident mode.

3. The proposed changes do not involve a significant reduction in a margin of safety. The proposed changes to the EECW system ACTION requirements may in fact increase the margin of safety as compensatory actions will be implemented at the time that the EECW system subsystem is discovered inoperable rather than 72 hours following the discovery.

The restructuring to reference ACTION requirements for only directly cooled components in the ACTION statements for an inoperable cooling water system is an administrative change made to promote consistency in the Technical Specifications and thus falls under example (i) of Examples Of Amendments Not Likely To Involve Significant Hazards Considerations listed in 51 FR 7751.

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 clarifies the compensatory actions that should be taken in the event of an inoperable EECW/EESW system subsystem or RHR reservoir. The amendment also promotes safe plant operation by giving a reasonable out-of-service time for surveillance testing and preventive maintenance on the EECW/EESW system and Ultimate Heat Sink without requiring unnecessary reactor shutdowns. The structure of the related Technical Specifications is also modified to support consistent operator usage.

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PROPOSED PAGE CHANGES