Frank E. Agosti Vice President Nuclear Operations



Fermi 2 6400 North Dixie Highway Newport, Michigan 48166 (313) 586-4150



September 30, 1986 VP-86-0133

Director of Nuclear Reactor Regulation Ms. Elinor G. Adensam, Director Project Directorate No. 3 Division of BWR Licensing U. S. Nuclear Regulatory Commission Washington D. C. 20555

Dear Ms. Adensam:

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

Subject: Proposed Technical Specification Change -Control Rod Scram Accumulators 3.1.3.5

Pursuant to 10CFR50.90, Detroit Edison Company hereby proposed to amend Operating License No. NPF-43 for the Fermi 2 plant by incorporating the attached change into the plant Technical Specification 4.1.3.5.b.1.b, Control Rod Scram Accumulators.

Detroit Edison was informed by General Electric that various GE BWR's have reported that the Hydraulic Control Unit (HCU) accumulator pressure switches have actuated below the limits of their plant Technical Specifications during surveillance testing. GE recommended that BWR's experiencing this problem should request a Technical Specification change.

Since Fermi 2 has also experienced this problem, Detroit Edison is requesting that Technical Specification 4.1.3.5.b.1.b be changed. The justification and supporting documentation accompanies this letter in the attached enclosure.

Detroit Edison has evaluated the proposed Technical Specification against the criteria of 10CFR50.59 and 10CFR50.92 and determined that no unreviewed safety question nor significant hazards considerations are involved.

The Fermi 2 Onsite Review Organization has approved and the Nuclear Safety Review Group has reviewed this proposed Technical Specification and concurred with the enclosed determinations.

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Pursuant to lOCFR170.12(c), enclosed with this amendment request is the fee of 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.

If you have any questions, please contact Mr. Steven Frost at (313) 586-4210.

Sincerely,

Enclosure

cc: Mr. M. D. Lynch Mr. W. G. Rogers Mr. G. C. Wright Supervisor, Advanced Planning and Review Section Michigan Public Service Commission USNRC Document Control Desk, Washington, D. C. 20555 Ms. Elinor G. Adensam September 30, 1986 VP-86-0133 Page 3

I, FRANK E. AGOSTI, 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.

The Ant.

FRANK E. AGOSTI Vice President Nuclear Operations

On this <u>30th</u> day of <u>September</u>, 1986, before me personally appeared Frank E. Agosti, being first duly sworn and says that he executed the foregoing as his free act and deed.

Karen M Reed Notary Public

KAREN M. REED Notary Public, Monroe County, Mich. My Commission Expires May 14, 1930

. ENCLOSURE

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### BACKGROUND/DISCUSSION

Several operating BWR's, including Fermi 2, have experienced Hydraulic Control Unit (HCU) accumulator pressure switches actuations below the limits stated in their Technical Specification during regularly scheduled surveillance tests. These pressure switches trip on low HCU accumulator nitrogen pressure and alarm in the control room. The purpose of this Proposed Technical Specification change is to increase the pressure switch setpoint to provide adequate instrument drift allowance so that sufficient nitrogen pressure is maintained for the required scram performance.

GE has contacted and made the following recommendation to the owners who are experiencing this pressure setpoint drift problem.

"General Electric recommends that the owners of plants with the 940 +30, - 0 psig requirements take the necessary actions to amend their Technical Specifications to state that the low pressure alarms be set at "Equal to or greater than 940 psig on decreasing pressure". The switches may then be set to trip at a higher value. (A nominal trip setpoint of 1025 psig or above on decreasing pressure should provide adequate setpoint drift margin).

Based on this recommendation we are submitting this proposed Technical Specification.

#### DESIGN BASIS

The Control Rod Drive Hydraulic System (CRDHS) is designed to provide sufficient fluid flow and pressure to drive the Control Rod Drive Mechanisms. The CRDHS effects changes in core reactivity by incrementally positioning neutron absorbing Control Rods within the Reactor core in response to control signals. It is also required to scram the reactor by rapidly inserting withdrawn control rods into the core in response to manual or automatic signals.

The scram accumulator and associated equipment function as required to rapidly insert the Control Rod Drive (CRD) in response to a reactor scram. Specifically the CRD accumulators are required to scram the control rods when the reactor pressure is low. When the reactor pressure is low, the accumulator retains sufficient stored energy to ensure the complete insertion of the control rod in the required time. The accumulator is not required for scrams when the reactor is close to or at full operating pressure. In this case the reactor pressure alone inserts the control rods in the required time. The accumulator does provide additional energy boost to the reactor pressure for scrams at

RPV pressures. Increasing the alarm setpoint will not affect or change the original design basis for the CRDHS. In fact by increasing the pressure, as recommended by GE, the probability that these pressure switches will actuate at their minimum pressure of 940 psig is increased. All associated equipment associated with the CRDHS will continue to perform its design function.

This proposed change will enhance the ability of the equipment to perform its intended safety function and still comply with GDC25, 26, 27, 28, FSAR Chapters 4 and 15 analysis and the other appropriate NRC Regulations.

### SAFETY EVALUATION

In accordance with 10CFR50.59, Detroit Edison has reviewed the attached change and has concluded that there is no unreviewed safety question.

 Is the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report may be increased?

No. Operation of Fermi 2 in accordance with the proposed Technical Specification will not involve an increase in the probability of occurrence or consequences of an accident previously evaluated. In fact, increasing the allowable setpoint of the HCU accumulator pressure switches increases the probability and reliability of control rod insertion by insuring adequate pressure is maintained in the HCU accumulators.

# 2) Is there a possibility for an accident or malfunction of a different type than evaluated previously in the safety annalysis report being created?

No. Operation of Fermi 2 in accordance with the proposed Technical Specification will not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed Technical Specification change increases the probability that the CRD accumulators will remain operable during periods between surveillance tests. Increasing the low pressure setpoint does not create a possibility of a new or different kind of accident from any accident previously evaluated. The Basis Section of the Fermi 2 Technical Specification states that the surveillance requirements to measure and maintain the pressure above the alarm setpoint is intended to provide information

> rather than establish OPERABILITY of the accumulators. No action is currently required if the accumulator pressure does not remain above the alarm setpoint during the surveillance. This supports the fact that this proposed Technical Specification change will not create the possibility of an accident or malfunction of a different type then previously evaluated. All alarms and equipment currently associated with the CRDHS will continue to perform their intended and designed functions.

3)

# Is the margin of safety as defined in the basis for any Technical Specifications reduced?

No. Operation of Fermi 2 in accordance with the proposed Technical Specification will not involve a significant reduction in a margin of safety.

The Basis Section of the current Technical Specifications, allows the accumulator pressure to fall below its alarm setpoint during the surveillance test. Since this practice is acceptable, increasing the setpoint to allow for the instrument drift conditions will make the proposed Technical Specification more accurate and increase the probability of proper operation. In addition, the control rods will insert with the accumulator pressure as low as 400 psig. Since the required low setpoint (940 psig) is not being reduced, there is no reduction in the margin of safety.

# Significant Hazards Consideration

In accordance with 10CFR50.92, Detroit Edison has reviewed the attached proposed Technica! Specification and has concluded that it does not involve a significant hazards consideration. The basis for this conclusion is that the three criteria of 10CFR50.92(c) are not compromised, a conclusion which is supported by our determination made pursuant to 10CFR50.59 and which is discussed below:

- 1) The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated. Increasing this setpoint is in compliance with GE recommendations and has been an accepted practice with other licensees. Approval of this Technical Specification will not increase any potential risk to the health and safety of the public. The proposed change increases the probability of CRDHS operation.
- The proposed change does not create the possibility of a new or different kind of accident from any previously evaluated. Since

> the HCU accumulators can still perform their intended function of inserting the control rods at a pressure as low as 400 psig, increasing the alarm setpoint above the current setpoint of 940 psig will not cause any new or different kind of accident. Increasing the setpoint likewise will not have any affects since the CRDHS will normally operate at reactor system pressure.

3) The proposed change does not involve a significant reduction in safety margin. By changing the setpoint in the conservative direction to allow for more the margin of safety is enhanced.

# ENVIRONMENTAL IMPACT

Detroit Edison has reviewed the proposed Technical Specification change against the criteria of 10CFR51.22 for environmental considerations. As shown above, the proposed change concerns increasing the low alarm setpoint of the HCU Accumulator Switch. This does not involve a significant hazards consideration, nor increase the types and 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 Specification meets the criteria given in 10CFR51.22(c)(9) for a categorical exclusion from the requirement 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 this proposed amendment will not be inimical to the common defense and security or to the health and safety of the public.

As stated above, Detroit Edison believes that this proposed Technical Specification will maintain or even possibly increase plant safety since it provides additional assurance of adequate nitrogen pressure for rod insertion.