

**B. Ralph Sylvia**  
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December 7, 1989  
NRC-89-0264

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-88-0283,  
"Proposed Technical Specification Change  
(License Amendment) - Suppression Chamber -  
Drywell Vacuum Breakers (3/4.6.4.1),"  
dated December 22, 1988

Subject: Proposed Technical Specification Change  
(License Amendment) - Suppression Chamber  
Drywell Vacuum Breakers (3/4.6.4.1)

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. Reference 2 proposed to modify the footnote associated with Limiting Condition of Operation (LCO) 3.6.4.1. Based on further internal review and discussions with the NRC staff we have determined that a footnote is not necessary. Therefore, this submittal proposes to delete the existing footnote on LCO 3.6.4.1. Additionally, this submittal supersedes Reference 2.

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.

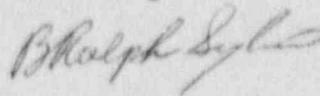
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If you have any questions, please contact Mr. Glen Ohlemacher at (313) 586-4275.

Sincerely,

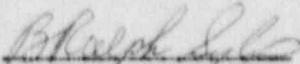


Enclosure

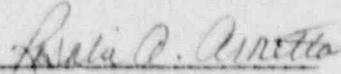
cc: A. B. Davis  
R. W. Defayette  
W. G. Rogers  
J. F. Stang  
Supervisor, Advanced Planning and Review Section,  
Michigan Public Service Commission

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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  
Senior Vice President

On this 7th day of December, 1989, 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

ROSALIE A. ARMETTA  
Notary Public, Monroe County, MI  
My Commission Expires Jan. 11, 1992

## **INTRODUCTION**

Vacuum breakers between the suppression chamber atmosphere and drywell provide vacuum relief to the drywell after a postulated Loss of Coolant Accident (LOCA). The condensing steam from a LOCA could cause a drywell vacuum condition to occur beyond its design value without these vacuum breakers. With the drywell in a vacuum condition, the suppression chamber-to-drywell vacuum breakers open to vent non-condensables from the suppression chamber atmosphere to the drywell. This equalizes the pressure between the drywell and suppression chamber. If a primary containment vacuum condition still exists, the Reactor Building-to-suppression chamber vacuum breakers will open to equalize the pressure between the Reactor Building and the suppression chamber. The suppression chamber-to-drywell vacuum breakers also act as check valves during a LOCA to prevent steam flow from passing through the vacuum breakers directly to the suppression chamber atmosphere (e.g., the valves close when drywell pressure is greater than or equal to suppression chamber air space pressure). The vacuum breakers are equipped with pneumatic actuators operated by pushbuttons from the main control room. The actuators are sized such that they have insufficient power to open the vacuum breakers if a backflow differential pressure exists.

## **EVALUATION**

The existing Technical Specification 3.6.4.1 requires that all suppression chamber-to-drywell vacuum breakers be closed except when manually opened for inerting the containment. The exception, "except when manually opened for inerting," is stipulated in a footnote which also requires that all vacuum breakers be closed within two (2) hours after inerting is completed. The bases for this footnote is to allow the opening of the vacuum breakers during containment inerting to facilitate nitrogen flow from the suppression chamber atmosphere through the vent header(s). The nitrogen, entered from the suppression chamber, would displace the containment's air content through the containment's drywell purge valves.

The proposed Technical Specification deletes the subject footnote because manually opening these vacuum breakers bypasses the pressure suppression feature of the suppression chamber. The containment was not designed to contain the effects of a LOCA if these vacuum breakers are open prior to the start of a LOCA. It should be noted that the subject vacuum breakers may momentarily cycle open during containment inerting because of a pressure differential. This is an operation that may occur during containment inerting and is consistent with the vacuum breakers design function (e.g., normally closed unless the suppression chamber air space is at a higher pressure than the drywell).

This proposed change eliminates a provision from the Technical Specifications which is inappropriate and unnecessary for plant

operation. On this basis, Detroit Edison believes this change is acceptable.

#### **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.

- 1) The proposed change does not involve a significant increase in the possibility or consequences of an accident previously evaluated because the proposed change is more conservative. The existing Technical Specification allows the suppression chamber to drywell vacuum breakers to be manually opened for inerting the containment and does not require closure of these vacuum breakers for up to two (2) hours after inerting is completed. The proposed change prevents this operation by deleting the LCO's footnote. Manually opening these vacuum breakers bypasses the pressure suppression feature of the suppression chamber. The containment was not designed to contain the effects of a LOCA if these vacuum breakers are open prior to start of a LOCA.
- 2) The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated because this change enforces a more conservative mode of operation, as described in item 1, and does not involve a physical modification to the plant.
- 3) The proposed change does not involve a significant reduction in safety because the change deletes the LCO footnote that allows manual opening of the suppression chamber to drywell vacuum breakers during inerting. This enforces a more conservative mode of operation as described in item 1.

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.