

**Detroit  
Edison**

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Nuclear  
Generation

March 19, 1990  
NRC-90-0055

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) NRC Generic Letter 89-19, "Request for  
Action Related to Resolution of Unresolved  
Safety Issue A-47-Safety Implication of  
Control Systems in LWR Nuclear Power Plants",  
dated September 20, 1989
  - 3) Detroit Edison Letter, NRC-89-0204, dated  
September 12, 1989
  - 4) Detroit Edison Letter, NRC-89-0207, dated  
September 28, 1989
  - 5) NRC Letter (TAC Nos. 59611 and 74835),  
dated December 4, 1989

Subject: Response to NRC Generic Letter 89-19

Detroit Edison has reviewed the Generic Letter 89-19 (Reference 2) which was received on October 9, 1989. This Generic Letter requests licensees to take actions related to resolution of USI A-47 as recommended in Enclosure 2 of the Generic Letter.

Detroit Edison has reviewed the Generic Letter's requirement to provide automatic reactor vessel overfill protection to mitigate main feedwater (MFW) overfeed events. Fermi 2 has an automatic overfill protection system which is initiated on a reactor vessel high-water-level signal on a 1-out-of-2 taken twice initiating logic, and is classified as a "Group I" plant in the Generic Letter. The Generic Letter has concluded that this design is acceptable provided that (1) the overfill protection system is separate from the MFW control system, and (2) the plant procedures and Technical Specifications include requirements to periodically verify operability of the system.

At Fermi 2, the overfill protection system is adequately separated from the MFW control system such that both of the systems are not

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powered from the same source, not located in the same cabinets and not routed so that a fire is likely to affect both systems. While the level of design does not preclude any possible situation from preventing the trip, it does protect against the most probable single failures (e.g., fuse or electrical component) and guards against maintenance errors, with the MFW Control System and overfill protection system being located in separate cabinets. In addition, Fermi 2 surveillance procedures and Technical Specifications have requirements to periodically verify the operability of the system. Thus, both of the provisions of GL 89-19 for "Group I" plants are satisfied by Fermi 2. The system design has been previously evaluated as acceptable by the NRC in NUREG-0798, Safety Evaluation Report for Fermi 2.

Detroit Edison has reviewed plant operating procedures and operator training in regard to reactor vessel overfill events that may occur via the condensate system pumps during reduced system pressure operation. Procedures clearly state the operating band for water level. A lesson plan provides information on the capability of the condensate system pumps. There are simulator scenarios involving loss of feedwater pumps in which the instructor stresses the potential problems caused by a reactor pressure vessel overfill situation and operator actions which should be taken to prevent this from occurring. Additionally, following review of this Generic Letter, two simulator evaluation scenarios were revised to specifically evaluate operator performance during potential reactor vessel overfill events. The review has concluded that Fermi 2 procedures and operator training are adequate to assure that the operators can successfully recognize and prevent such overfill events.

Although not requested by the Generic Letter, Detroit Edison has also reviewed High Pressure Coolant Injection (HPCI) and Reactor Core Isolation Cooling (RCIC) Systems high reactor vessel water level trips. These trips are similar to MFW trips except the initiating logic is 2-out-of-2 which is classified as "Group II" in the Generic Letter. Our review has concluded that for both HPCI and RCIC systems, the protection system is separate from the control system and the high reactor vessel trips are adequately addressed in plant procedures and Technical Specifications. Therefore, HPCI and RCIC also satisfy the provision of this Generic Letter.

Hence, as discussed above, Fermi 2 design is consistent with the recommendations of this Generic Letter and no additional actions are required to be implemented.

A plant specific control systems failure analysis was recently conducted for Fermi 2. The results were submitted in References 3 and 4 and the NRC issued its Safety Evaluation Report in Reference 5.

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If you have any questions, please contact Mr. Girija Shukla at (313)  
586-4270.

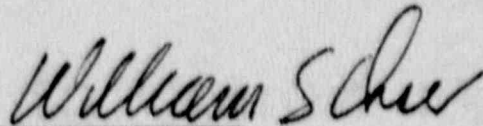
Sincerely,

A handwritten signature in cursive script, appearing to read "Ullrich".

cc: A. B. Davis  
R. W. DeFayette  
W. G. Rogers  
J. F. Stang

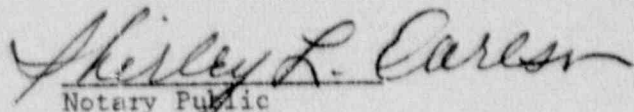


I, WILLIAM S. ORSER, do hereby affirm that the foregoing statements are based on facts and circumstances which are true and accurate to the best of my knowledge and belief.



WILLIAM S. ORSER  
Vice President,  
Nuclear Operations

On this 10th day of March, 1990, before me personally appeared William S. Orser, being first duly sworn and says that he executed the foregoing as his free act and deed.



Notary Public  
SHIRLEY L. CARLSON  
Notary Public, Wayne County, MI  
My Commission Expires Jan. 28, 1991