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October 17, 1996
NRC-96-0089

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

- References: 1) Enrico Fermi Atomic Power Plant, Unit 1
NRC Docket No. 50-16
NRC License No. DPR-9
- 2) Proposed Technical Specification Change
Enrico Fermi Atomic Power Plant, Unit 1
NRC-96-0111 Dated August 29, 1996

Subject: Licensing Event Report (LER) No. 96-002

Detroit Edison is submitting this Licensee Event Report (LER 96-002) in accordance with the Fermi 1 Technical Specifications, Section I.8 as a condition prohibited by the Technical Specifications. Per Section I.8, this report contains a description of the occurrence and the steps taken to correct the situation.

Fermi 1 was a sodium-cooled, fast breeder reactor permanently shutdown in 1972 and is currently in SAFSTOR status. During the decommissioning process, virtually all sodium was removed from the primary system, however, a residual amount of sodium remains in the vessel and piping. Carbon dioxide (CO₂) provides a cover gas to the primary system to assure normal air, which contains moisture, is not allowed to come into contact with the residual sodium. Fermi 1 Technical Specifications Section H.1, Table H-1 includes low and high pressure alarms for primary system pressure CO₂ cover gas supply. Section H.1 requires that each of the items in Table H-1 shall activate an alarm. The alarm points are 1/2 inch W.C.G. minimum and 2 psig maximum. These alarm points are checked semi-annually. CO₂ pressure is checked and recorded weekly. The pressure of the cover gas is required by Technical Specification D.1 to be maintained above atmospheric pressure.

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On September 17, 1996, the high pressure switch could not be satisfactorily calibrated. The existing pressure switch was removed and a new switch installed. During the installation, a fitting between the pressure switch and the test connection was found to be cracked. This fitting was also replaced.

The investigation discovered that the fitting had a cracked sleeve and the tubing was not flared. The fitting allowed leakage which was determined to be the reason that the tubing would not hold pressure and could not be calibrated. The high pressure alarm switch was removed from the system for about 45 minutes during the replacement of the fitting and pressure switch.

This event is being reported as a condition prohibited by the Fermi 1 Technical Specifications in that the Fermi 1 Technical Specifications do not provide allowed out of service times for required equipment. This fact was previously recognized. On August 29, 1996, a proposed change to the Technical Specifications was submitted (Reference 2) requesting a 30 day out of service time for the primary system pressure alarm, provided increased monitoring of the cover gas pressure is implemented. However, this change has not yet been approved.

The alarm switch was removed for approximately 45 minutes. This condition has been evaluated, and determined not to be safety significant. It could not, by itself, lead to loss of CO₂ cover gas pressure. An operator was present to observe and check the cover gas pressure. Pressure remained above atmospheric at all times and therefore was in compliance with the Technical Specifications.

With respect to the leaking fitting, it did not adversely affect the CO₂ system's ability to maintain adequate pressure in the primary system. The location of the low pressure switch is such that it was unaffected by the leaking fitting and the switch continued to monitor supply pressure. The high pressure switch is located downstream of the leak and may have been affected by the leaking fitting such that the pressure at the switch may have been slightly lower than actual pressure. The switch would then activate at a system pressure slightly higher than the 2 psig setpoint. The high pressure alarm is intended to be an indication of trouble with the upstream pressure regulator. High pressure that could have damaged the CO₂ system is prevented by a relief valve set at approximately 5 psig.

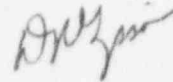
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The investigation of the event determined that the cause was stress corrosion cracking of the fitting and that the crack was not recent. It most likely existed prior to the last test of the high pressure switch in May 1996. It is believed that the fitting was sufficiently disturbed during the attempt to calibrate the high pressure switch on September 17, 1996, that the crack began to leak at that time. The investigation found no evidence of a significant leak prior to that time.

As indicated above, the fitting and pressure switch were replaced. Additional corrective actions included a walkdown of the other connections on the instrument rack. No visible signs of cracking and no leaks were observed.

No new commitments are being made in this letter. If there are any questions please contact Lynne Goodman, Director - Fermi 1 at (313) 586-1205.

Sincerely,



cc: A. B. Beach
S. W. Brown
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Region III