

DMB

Wayne H. Jens
Vice President
Nuclear Operations

**Detroit
Edison**

2000 Second Avenue
Detroit, Michigan 48226
(313) 586-4150

April 16, 1984
EF2-66736

Mr. James G. Keppler
Regional Administrator
Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Dear Mr. Keppler:

Reference: Fermi 2
NRC Docket No. 50-341

Subject: Report of 10CFR50.55(e) Item on Deficiency
in Design Concerning the Nitrogen Inerting
System Isolation Valves (#118)

On March 9, 1984, Detroit Edison's Mr. L. P. Bregni,
Engineer - Licensing telephoned Mr. J. E. Konklin of the
NRC Region III, to report a deficiency in the design of
the controls for the nitrogen inerting/purge system con-
tainment isolation valves at the Fermi 2 site.

Descriptions (LC) of Deficiency

A design change package (DCP) for the nitrogen inerting/
purge system was released for construction, in accordance
with Detroit Edison Procedure 3.24. The design change was
implemented in the field as called for by the DCP. The
design for the applicable primary containment isolation
valves, as released in the DCP, did not meet single fail-
ure criteria as required by the FSAR. This deficiency was
discovered by the Design Group during final review for
approval of the base configuration documents (i.e., P&IDs
Logic and Schematic diagrams) as required by Procedure
3.19.

The containment isolation valves in question are solenoid
actuated, pneumatic powered valves designed to go to the
safe position (closed) on loss of power to the solenoids
or loss of air. As a consequence there was no need for a
class 1E power source as long as appropriate safety grade
controls were used. However, the controls were designed
non-safety grade which resulted in inboard and outboard
cables being located in common tray systems and panels.

8404260066 840416
PDR ADOCK 05000341
S PDR

APR 18 1984

IE27 1/0

James G. Keppler
April 16, 1984
EF2-66736
Page 2

Analysis of Safety Implications:

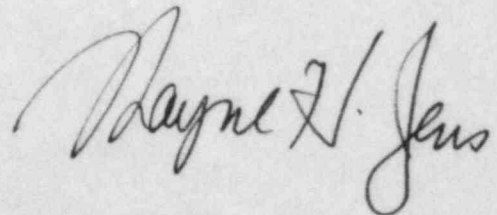
The valves in question are generally normally closed except as required for containment pressure or N₂/O₂ control, or for purging prior to containment entry. The valves are required to close upon receipt of a LOCA isolation signal. As a consequence of the deficiency, however, primary containment integrity can not be assured in the event of a LOCA with a coincident single failure. Given these conditions, the inboard and outboard isolation valves could remain open due to a single failure in the common mode associated circuitry to the valves.

Corrective Action

The design is being modified to add qualified electrically and physically separated isolation signals for the purge and inert system primary containment isolation valves. Detroit Edison has reviewed all primary containment isolation valves in a similar category (normally closed and de-energized to close valves), to verify that the proper isolation features have been provided. This review showed that these designs were proper. Accordingly, Detroit Edison has concluded that this occurrence was isolated and no further corrective action is required.

This is considered the final report on this item. Completion of the design changes and the field implementation will be tracked and verified by the Nuclear Quality Assurance Department. If you have questions concerning this matter, please contact Mr. Lewis P. Bregni, (313) 586-5083.

Sincerely,



cc: Mr. P. M. Byron
Mr. R. DeYoung
Mr. J. E. Konklin