Fermi 2
6400 North Dixie Hwy., Newport, MI 48166

Detroit Edison

June 9, 1999
NRC-99-0047

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington D C 20555-0001

References: 1) Fermi 2
NRC Docket No. 50-341
NRC License No. NPF-43

2) NRC Generic Letter 96-06, "Assurance of Equipment Operability and Containment Integrity During Design-Basis Accident Conditions", dated September 30, 1996

3) Detroit Edison Letter to NRC, "Detroit Edison 30-Day Response to NRC Generic Letter 96-06", NRC-96-0118, dated October 30, 1996

4) Detroit Edison Letter to NRC, "Detroit Edison 120-Day Response to NRC Generic Letter 96-06", NRC-97-0003, dated January 28, 1997

5) NRC Letter to Detroit Edison, "Request for Additional Information Related to the Fermi-2 Response to Generic Letter 96-06", dated September 9, 1997

6) Detroit Edison Letter to NRC, "Additional Information Related to Detroit Edison Response to NRC Generic Letter 96-06", NRC-97-0111, dated October 17, 1997

7) Detroit Edison Letter to NRC, "Update of Detroit Edison Response to NRC Generic Letter 98-06", NRC-98-0058, dated March 22, 1998

8) NRC Letter to Detroit Edison, "Request for Additional Information (RAI) Related to the Fermi-2 Response to Generic Letter 96-06, Assurance of Equipment Operability and Containment Integrity During Design-Basis Accident Conditions", dated April 6, 1998

9) Detroit Edison Letter to NRC, "Additional Information Related to Detroit Edison Response to NRC Generic Letter 96-06", NRC-98-0094, dated June 30, 1998

10) NRC Letter to Detroit Edison, "Request for Additional Information Related to Fermi 2 Response to Generic Letter 96-06", dated May 13, 1999

Subject: Response to NRC Request for Additional Information Related to Detroit Edison Response to NRC Generic Letter 96-06 (TAC No. M96811)

The purpose of this letter is to provide a Detroit Edison response to Reference 10, which requested Detroit Edison to provide additional information regarding Fermi 2 response to Generic Letter 96-06. The questions in Reference 10 were discussed in a telephone conference (telecon) held on May 13, 1999 between Detroit Edison and the NRC staff. Your questions and our responses, as discussed in the telecon, are as follows:

1. In your submittal dated March 27, 1998, in response to Generic Letter 96-06, you stated that modifications were not planned for three (X-8, X-49a and X-51a) of the six drywell penetrations that were identified as susceptible to thermally induced pressurization. You determined that modifications were not necessary on the basis that these penetration satisfy the strain criteria as proposed in the Electric Power Research Institute (EPRI) Report TR-108812R1. However, the staff has provided several comments to the industry on the proposed criteria and the EPRI strain criteria is not acceptable to the staff. You need to re-evaluate these three penetrations and consider installing relief devices or some other means to protect the penetrations from thermally induced pressurization. Provide the schedule for your evaluation.

   Response:

   EPRI had proposed additional 'Phase 2' testing to resolve the staff comments on report TR-108812R1. This task did not receive the necessary level of utility

support and was recently canceled. As such, we now plan to reanalyze these three penetrations to determine an appropriate resolution to the thermally induced pressurization concern. We will complete the re-evaluation of these three penetrations by November 30, 1999. We will also keep the NRC informed of the outcome of the re-evaluation and any necessary follow up actions.

2. For penetration X-29Aa, provide the calculation that shows that the pressure acting under the inboard isolation valve seat will open the spring-to-close isolation valve to relieve the pressure, and discuss any source of uncertainty associated with the calculated lift pressure.

   Response:

   Attached please find the pertinent pages from Design Calculation No. 5957, Volume 1, Revision A, which show that the pressure acting under the inboard isolation valve (B3100F019) seat will open the spring-to-close isolation valve to relieve the pressure. The actuator pressure at which the valve stem just begins to move was measured (in two different field tests). Using the measured pressure and the diaphragm area, the resulting actuator stem force closing the valve was calculated and compared to the calculated stem force from underseat pressure. This approach reduces the uncertainty associated with the calculated lift pressure. In addition, the calculated margin is substantial.

3. For penetrations X-18 and X-19, confirm whether the rupture disks have been installed and how you have assured that these pressure relief mechanisms will function as intended.

   Response:

   The rupture disks for penetrations X-18 and X-19 were installed via Engineering Design Package 28747 during the sixth refueling outage in the fall of 1998.

   The overpressure protection has been designed to minimize impact on normal system operation and on containment integrity. The rupture disk burst pressure is based on the minimum piping system allowable working pressure. As a result, the burst pressure is more than twenty-five times the normal operating pressure for these lines. The piping systems are located in the lower regions of the drywell where the normal operating temperature ranges are not high. The lines to the rupture disc were routed to remain full so that pressure surges are minimized. These measures will prevent the premature burst problems experienced with rupture disks at other plants.

Should you have any questions or require additional information, please contact Mr. Norman K. Peterson of my staff at (734) 586-4258.

Sincerely,

William T. O'Connor, Jr.
Assistant Vice President,
Nuclear Assessment

Attachment

cc: A. J. Kugler
A. Vegel
NRC Resident Office
Regional Administrator, Region III
Supervisor, Electric Operators,
Michigan Public Service Commission

I, WILLIAM T. O'CONNOR, JR., 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 T. O'Connor Jr

WILLIAM T. O'CONNOR, JR.
Assistant Vice President, Nuclear Assessment

On this 9th day of June, 1999 before me personally appeared William T. O'Connor, Jr., being first duly sworn and says that he executed the foregoing as his free act and deed.

Karen M. Reed-Ockerman

Notary Public

KAREN M. REED-OCKERMAN
Notary Public, Monroe County, MI
My Commission Expires Sep. 2, 2003