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November 26, 1984
EF2-72015

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

Dear Mr. Keppler:

Reference: (1) Fermi 2
NRC Docket No. 50-341

(2) Letter, W. H. Jens to J. G. Keppler,
October 9, 1984, EF2-70022

Subject: Detroit Edison Amended Response to
NRC Inspection Report No. 50-341/84-16

This letter provides an amended response to the deviations described in your Inspection Report No. 50-341/84-16 based on discussions with your staff on October 30, 1984. This revises the Reference (2) response previously submitted.

The items classified as deviations are discussed in the attached response and are arranged to correspond to the sequence of items cited in the body of your report.

We trust this letter will satisfactorily respond to the deviations listed in your report. If you have questions regarding this matter, please contact Mr. Lewis Bregni, (313) 586-5083.

Sincerely,

Wayne H. Jens

cc: P. M. Byron
R. C. Knop
C. Ramsey
USNRC, Document Control Desk
Washington, D.C. 20555

DEC 3 1984

THE DETROIT EDISON COMPANY

FERMI 2

NUCLEAR OPERATIONS ORGANIZATION

REVISED RESPONSE TO NRC REPORT NO. 50-341/84-16

DOCKET NO. 50-341 LICENSE NO. CPPR-87

INSPECTION AT: FERMI 2, NEWPORT, MICHIGAN

INSPECTION CONDUCTED: May 14-18, June 5, and July 10-11, 1984

RESPONSE TO NRC INSPECTION REPORT NO. 50-341/84-16

Statement of Deviation 84-16-02

By letters dated July 31, 1981, November 24, 1981 and January 4, 1982, the applicant provided the NRC with the results of fire tests conducted on the control room panels containing the controls, instrumentation and associated circuits for all the required safe shutdown systems. As a result of the fire test conducted, the applicant committed to certain design modifications to the panels to enhance their fire resistive capabilities and provide assurance that one train of systems needed for safe shutdown would remain free of fire damage in the event of a control room fire.

The applicant committed to meet the requirements of Appendix R to 10 CFR Part 50 as discussed in a meeting with the NRC staff on May 27, 1981, and to demonstrate that a single fire would not damage both redundant safe shutdown trains.

Contrary to the above, the applicant failed to provide the design modifications to the control room panels containing the controls, instrumentation and associated circuits for all of the required safe shutdown systems that were described in the FSAR, SER and letter submitted to the NRC. The as-built configuration of these panels does not provide assurance that one train of systems needed for safe shutdown will remain free of fire damage in the event of a control room fire. The applicant had no plans to complete these design modifications. This is considered a deviation from previous commitments to the Commission and is further discussed in paragraph 4c(4) of the inspection report.

Detroit Edison Response and Action Taken

Edison acknowledges that there were many clarifications and discussions between the NRC staff and Edison engineering in parallel with the issuance of SSER 2. These clarifications and discussions left Edison with an understanding of what was thought to be the basis of SSER 2 when it was issued.

A specific discussion concerning each of the areas of deviation listed in Section 4c(4) in the inspection report follows below. It should be noted, however, that in the process of reviewing with NRR an acceptable solution to the issues raised in Generic Letter 83-33 dated October 1983, Edison has now committed to provide alternate shutdown for the control center area. This commitment was made at the July 11, 1984, meeting and supersedes the commitments made in previous letters. Official notice of the commitment to alternate shutdown via Appendix R III.L was submitted to NRR

in Edison letters EF2-72718 dated August 16, 1984 and EF2-71994 dated October 22, 1984. As you are aware, the alternate shutdown concept was subsequently concurred with by NRR in a meeting on November 2, 1984. The Company expects NRR to amend the SER accordingly. In light of the above, the findings cannot be addressed without including the commitment to use an alternate shutdown method, which reorders any of the Control Center modifications to an interim measure status.

The response to the seven deviations of the inspection report 84-16, Section 4c(4) is as follows:

(a) "The panels were not completely enclosed and free of penetrations."

(b) "The panels were not provided with separate forced ventilation systems. Instead, the applicant determined that natural ventilation was sufficient."

During the review process with NRR, there were some discussions regarding enclosing the backs of the remaining safety related panels. However, enclosing the backs of the COP panels was not entered on our internal action list and failed to show up as a licensing condition in any SER supplement. After Supplement 2 to the SER was issued, there were further discussions with NRR regarding the back on panel H11-P602 and the upper ventilation openings on the other control room panels as part of the description of the proposed COP ventilation modifications. The notification for the change of the commitments for the panel ventilation was made in Detroit Edison's Letter EF2-61562 dated March 1, 1983. The ventilation and panel enclosure issue was discussed in Region III Inspection Report, Open Item 341/83-12-01, and was open pending NRR's decision on the request. NRR's decision on this subject was not indicated to Edison until the ventilation request was verbally denied at the April 3, 1984 meeting. This subject, as part of the control room agenda, was discussed in the June 5, 1984 and July 11, 1984 meetings that resulted in the commitment by Edison to use alternate shutdown to meet Appendix R. Edison intends to fully comply with the identified commitments made in the August 16, 1984 and October 22, 1984 letters, but previously identified commitments for the control center to meet Appendix R III.G are no longer applicable. Therefore, there will not be a back installed on H11-P602, nor will the upper

ventilation louvers be closed. Panels H11-P601 will not have a top installed nor will the ceiling panels require modification (see item (g)). The unsealed penetrations between the opposite division panels are discussed under item (d).

The ventilation modification was identified in Supplement No. 2 of the SER as a commitment. The proposed modification consisted of supplemental fans, fire dampers, and ductwork into the COP's. In the process of designing the system, it became apparent that the heat generated by the panels could be removed by a simpler method. As mentioned above, the possibility of changing this commitment was discussed with NRR and documented in EF2-61562 of March 1, 1983. Edison considered this item as under review with NRR until the April 3, 1984 meeting where this request was verbally denied. Additionally, Region III open item 341/83-12-01 listed the ventilation status as open pending the NRR decision. However, the commitment to use alternate shutdown as a means of shutting down from a control room fire supersedes the previous commitments for a COP HVAC system. Edison does not intend to install a COP ventilation system.

(c) "All plastic components such as face plates, annunciator boards and control switches were not removed from the front of the panels and replaced with glass or other noncombustible materials."

Edison agrees that there was a commitment to reduce the amount of plastic in the COP, but not all plastic components were included in that commitment. For example, Edison conducted a heat up test on the plastic control (CMC) and pushbutton switches to show they could withstand the temperatures, as indicated in the November, 1981 report "Evaluation of Selected Control Panel Components Subjected to a Postulated Exposure Fire 6." Edison would not have conducted such tests if these plastics were to be replaced. Edison has replaced the plastic annunciator window inserts with glass as stated in Supplement No. 2 of the SER, summary of the proposed modifications.

Plastic windows on recorders on safety related panels in the control room will be replaced with non-glare glass where practicable. This replacement will also improve the ability to read the instrument. The commitment made at the July 11, 1984 meeting to use

alternate shutdown for the control room actually supersedes the need for the earlier commitments to reduce the plastics. Edison therefore does not plan to replace any other plastic other than the annunciator and recorder windows.

(d) "The panels contained louvered openings and open spaces at floor level between the floor penetration seal and the four inch concrete pad which the panels are mounted on. Unsealed penetration openings existed around a ground bus bar penetrating the 3/16 steel plate between each set of panels."

The louvered openings at the floor level on the back of panels H11-P601 and H11-P812 have a steel plate mounted behind the louvers. (Panel H11-P812 is a non safety related panel that separates the rear of panel H11-P601 from the open back of H11-P602) The remaining shutdown panels do not have louvered openings at the floor level.

The openings between the redundant panels at the floor penetration and around the ground bus bar should have been sealed based on the SSER statement that the steel panels are free of penetrations. Edison has sealed these openings as indicated in the July 11, 1984 meeting and in EF2-72718.

(e) "Louvered access doors covered with marinite board installed on the front of the panels are interchangeable with other control room panels that are not required for safe shutdown. During the inspection, one of these doors was found installed on a control room panel not required for safe shutdown. A louvered access door that was not covered with marinite board was installed in safe shutdown panel P-602."

Edison did complete the SER commitment to install a Marinite panel in front of the COP lower access doors. However, as indicated in the inspection report, a Marinite covered and an uncovered access door were interchanged. As soon as this problem was discovered, the access doors were immediately switched so that the doors were in the proper location.

As indicated in the July 11, 1984 meeting and in Detroit Edison's letter EF2-72718, Edison committed to labeling the outside of the doors or affixing mechanical devices to ensure the doors are installed on the correct panel.

(f) "Unidentified Division I and Division II cables were installed on the west control room wall near the rear of panel P-602 and in the ceiling above panels P-601 and P-602."

A number of safety related circuits are routed in conduit on the west wall and above the false ceiling over panels H11-P601 and H11-P602. These conduits are controlled and identified in the cable routing program. None of the circuits directly behind H11-P602 were identified as being required for Appendix R shutdown. Certain conduits located above the false ceiling were identified as required by Appendix R and were included in the conduit wrap program. Subsequent analysis has shown that reactor shutdown can be achieved without these circuits. As indicated in the July 11, 1984 meeting and in the August 16 and October 22, 1984 letters, the fire wrapping will not be completed any further in the control center. Wrap that is presently installed will be maintained until the alternate shutdown capability is operational.

(g) "A false ceiling was installed above panels P-601 and P-602 which was not previously described to the NRC and was not included in the applicant's prototype for testing of the panels."

The false ceiling referred to in this report is believed to be the facade ceiling extending down to the top of the front panels, including panels H11-P601 and H11-P602. This ceiling was in place during the time of the 1981 NRR inspection and was not raised as an issue. The purpose of the prototype fire test of the panels was to demonstrate that the circuits inside the adjacent panels were not damaged from an exposure fire outside the panels, potentially causing fire damage to circuits in both divisions. The commitment to provide alternate shutdown capability, made at the July 11, 1984 meeting and in the August 16 and October 22, 1984 letters, supersedes the need to demonstrate that fire damage would not occur to both divisions.

Edison has in place a commitment tracking system which should preclude a recurrence of this nature. The Edison commitment tracking system has been in operation for over three years but was not fully implemented until after the time frame in which SSER 2 was drafted. The system was established for the three-fold purpose of providing

additional assurance that statements made to the NRC in official correspondence would:

1. be fulfilled if future action was required

2. be verified to be true if the statement was made in the past or present tense

3. continue to be true unless and until the statement was officially modified

The commitment register tracking system is more explicitly described in Nuclear Engineering Instruction NE-2.1.9, "Licensing Commitment Register Instruction". It should be noted that official correspondence from the NRC is not explicitly reviewed for commitments per this instruction. All correspondence from NRC, however, is reviewed for action items in accordance with Nuclear Operations Interfacing Procedure 11.000.119, "Communication With The Nuclear Regulatory Commission", and Nuclear Engineering Instruction NE-2.1.2, "General Licensing Review, Assessment, Action Assignment, and Followup." These procedures provide for appropriate licensing review of pertinent licensing correspondence (including correspondence from NRC) for action items and commitments and provides for the neccessary software to assign action items and track them. In this regard, as an example, SER and SER supplements receive a thorough review and appropriate comment letters are sent to the NRC. Those letters, in turn, are reviewed for commitments per NE-2.1.9. To prevent misunderstanding concerning commitments made in informal discussion, it is Edison's policy to follow up such discussions with formal commitments in writing. These then would also be tracked using the commitment tracking system.

Statement of Deviation 84-16-09

In response to the NRC position stated in Appendix 9B of the Fermi-2 FSAR, the licensee made a commitment to install the fire pump installations in accordance with National Fire Protection Association (NFPA) Standard 20. NFPA 20 requires that the fuel oil storage tank for diesel engine driven fire pumps be full at all times and be free of all water and foreign material. The temperature of the pump room, pump house or areas where diesel engines are installed is required to be maintained not less than the minimum recommended by the engine manufacturer. This minimum is generally 70° F.

Contrary to the above, the diesel fire pump fuel oil storage tank is installed above ground outside of the fire pump house and is exposed to freezing temperatures and gelling of the diesel fuel during winter months. This condition does not meet the intent of NFPA 20 and could result in the failure of the diesel fire pump during cold weather. This is considered a deviation from previous commitments to the Commission and is further discussed in paragraph 7.a. of the inspection report.

Detroit Edison Response and Action Taken

The current version of NFPA 20 is 1983. Paragraph 1-2.2, existing installations, states that "Where existing pump installations meet the provisions of the standard in effect at the time of purchase, they may remain in use provided they do not constitute a distinct hazard to life or adjoining property."

The Fermi 2 FSAR identifies NFPA 20-1970 as the code version in effect at the "time of purchase". The system as currently installed meets the requirements of NFPA 20-1970 and the present location of the tank does not "constitute a distinct hazard to life or adjoining property". NFPA 20-1970 requires the tank be "...located in accordance with municipal ordinances and requirements of the authority having jurisdiction." The tank met this criteria at the time of installation.

Supplement 2 of the SER identified the location of the diesel fuel oil tank as being outside. This location is consistent with Appendix A of BTP 9.5.1 and was accepted by NRR in Appendix E, Supplement No. 2 of the SER. Edison believes the tank location is proper. Edison experience at its fossil plants where the oil tanks are located outdoors indicates no cold weather starting or operating problems with the diesel driven fire pumps.

Detroit Edison does not regard this to be a deviation, but to assure that the diesel fuel will not gel in cold weather, a fuel blend of 50% #1 diesel fuel and 50% #2 diesel fuel is used. This is in accordance with the manufacturer's recommendations for cold weather operation. The fuel oil supplier, in addition, has certified this fuel down to -25°F (pour point). Fermi 2 is revising its procedures to test the fuel at 6-month intervals for acceptable cloud point and pour point. These tests are done in addition to the Technical Specification required testing for water and sediment content and kinematic viscosity of the fuel. We believe these tests meet the intent of the code to ensure operation of the pump in cold weather.

Notwithstanding the above, Detroit Edison agreed, at a meeting with your staff on November 2, 1984, to enhance the fuel oil system for the diesel fire pump and starting diesel for the applicable combustion turbine generator by installing a fuel oil warming device prior to the respective fuel filter. Edison agrees to have the modification to the diesel fire pump completed as soon as practical and before exceeding 5% power, and the modification to the combustion turbine generator starting diesel completed by September 30, 1985.