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December 18, 1984
EF2-70221

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: Detroit Edison Response
Inspection Report 50-341/84-37

This letter responds to the items of noncompliance described in your Inspection Report No. 50-341/84-37. This inspection was conducted by Messrs. D. E. Hills, S. G. Du Pont, G. F. O'Dwyer and Ms. P. R. Rescheske of NRC Region III between October 1 and 26, 1984.

The items of noncompliance are discussed in this reply as required by Section 2.201 of the NRC's "Rules of Practice", Part 2, Title 10, Code of Federal Regulations.

The enclosed response is arranged to correspond to the sequence of items cited in the body of the inspection report. The appropriate criterion and the number identifying the item are referenced.

We trust this letter satisfactorily responds to the non-compliances cited in the inspection report. If you have questions regarding this matter, please contact Mr. Lewis Bregni, (313) 586-5083.

Sincerely,

cc: P. M. Byron
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THE DETROIT EDISON COMPANY

FERMI 2

NUCLEAR OPERATIONS ORGANIZATION

RESPONSE TO NRC REPORT NO. 50-341/84-37

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

INSPECTION AT: FERMI 2, NEWPORT, MICHIGAN

INSPECTION CONDUCTED: OCTOBER 1 - 26, 1984

Statement of Noncompliance 84-37-01

10 CFR 50, Appendix B, Criterion V states that "activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings."

Contrary to the above, activities were not accomplished in accordance with Plant Operations Manual Procedure (POM) 12.000.15 PN-21 (Work Order Processing) which resulted in two separate occurrences of loss of configuration control. In one case, an abnormally open knife-type switch prevented a diesel generator from being loaded properly during routine surveillance testing. In another case, an improperly opened vent line resulted in a discharge of water to the Reactor Building atmosphere during PRET (4100.001) Standby Liquid Control System Testing.

Corrective Action Taken and Results Achieved

The results of Detroit Edison's investigation into these two occurrences of loss of configuration control and the corrective action taken are as follows:

As stated in the NRC inspector's report, knife switch "RB" in the ground connection for the "wye" connected load meter for Emergency Diesel Generator #11 was found open. This open knife switch caused the loadmeter to indicate only a portion (approximately 2/3) of the actual load during the performance of a surveillance procedure which required loading EDG #11 to greater than 2850 kilowatts (KW).

The open knife switch resulted in the inability to complete a surveillance test on September 16, 1984; the same surveillance test had been successfully completed on August 19, 1984. Detroit Edison's investigation revealed that only two tasks which would put personnel in proximity with the knife switch were performed between the dates of these surveillance tests. Three independent studies concluded that neither of these tasks required that the loadmeter ground connection knife switch be opened. These studies consisted of reviews of the tagging details and work packages of the two tasks and included interviews with the personnel involved. Each study concluded that neither task would require the knife switch to be opened and that it was indeterminate as to why the switch was open.

Corrective Action Taken and Results Achieved (Cont'd)

The electrical circuits for EDG #11 were tested for damage associated with overloading; no damage was found. The surveillance procedure which required loading EDG #11 was then repeated successfully.

During the course of the Standby Liquid Control initiation test, the vent isolation valves were left open and vent cap was not installed due to the failure to use an abnormal lineup sheet. The test required the replacement of the squib assembly for valve C41-F004A. This task required venting and draining a portion of the system. The personnel involved failed to document the vent path valve lineup on an abnormal lineup sheet (ALS) and subsequently failed to inform the personnel who finished the work on the next shift. Subsequently, the test was completed successfully.

Corrective Action Taken to Avoid Further Noncompliance

During the investigations related to this item of non-compliance, Detroit Edison concluded that more explicit guidance on the use of the ALS was appropriate. A change has been issued to POM 21.000.01, "Shift Operations and Control Room" to clarify when the use of an ALS is required.

In addition, personnel involved in the squib replacement were counselled by their supervisors on the purpose and importance of the ALS, and keeping the Shift Supervisor informed of plant status was discussed at the next Startup Test Group meeting.

Date When Full Compliance Will Be Achieved

Full compliance has been achieved.

Statement of Noncompliance 84-37-02

In the DECo FSAR Appendix A, Detroit Edison Co. commits to the requirements of Regulatory Guide 1.30 which endorses ANSI N45. 2.4-1972 as a method of satisfying the requirements of 10 CFR 50, Appendix B, Criterion XI. As implemented in part by Plant Operations Manual Procedure (POM) 12.000.25T Interim Temporary Modifications Procedure, ANSI N45.2.4-1972 states that "temporary electrical connections, temporary piping sections, abnormal chemical solutions, unspecified setting of devices, the fixing of a moving component, or the effecting of any other abnormality if made previously shall be rectified before final testing except in cases where fuel loading or other critical operations prevent using the complete assembly for test. In these instances, a documented notice shall be prepared stating the substitutions that existed for the test."

Contrary to the above, during PRET A8100.001 ECCS Integrated Testing, licensee personnel failed to identify the entire function of a temporary modification which resulted in inoperative reactor vessel low level isolation logic for the Torus Water Management System Isolation Block Valves which was required to be functional for the test.

Corrective Action Taken and Results Achieved

The cause of the Startup Test Engineer's (STE) failure to identify the entire function of Temporary Modification (TM) No. 84-0201 has been determined to be inadequate preparation and review of the TM Record (TMR) form. This TM was originally issued as No. 365 in January 1983 but was re-issued as No. 84-201 after the TM procedure was revised. The specific problem was that the "Reason for Modification" section of TMR No. 84-0201 identified only that the TM bypassed sump level switches in the containment isolation logic; it failed to identify that the TM also was intended to and did bypass the Low Reactor Water Level and High Drywell Pressure trip for the 8 containment isolation valves in the Torus Water Management System (TWMS).

When ECCS Integrated Test results indicated that the TWMS containment isolation valves failed to close on a low reactor water level signal, the problem was traced to tags 4 and 5 of TMR 84-201. The jumpers associated with tags 4 and 5 were removed and all 8 valves were verified to operate on a low reactor water level isolation signal.

Corrective Action Taken and Results Achieved (Cont'd)

Regarding a different Preoperational Test, an NRC Inspector reviewed Test Exception Disposition Report (TEDR) No. 4 to PRET. Ell00.001 which addressed a missing "hard wired" jumper. It should be noted that the term "hard wired" jumper refers to a wire that is part of the cabinets designed wiring. At his exit interview on November 29, 1984, the NRC Inspector requested that Detroit Edison report the status of this item in this report. Detroit Edison has researched this matter but was unable to determine the cause of this discrepancy. The jumper has been replaced to conform to Drawings 6I721-2095-27 and 6I721-2095-28 and the Preoperational Test has been completed successfully. It should be noted that this discrepancy was identified and corrected during the normal course of the Preoperational Test Program.

Corrective Action Taken to Avoid Further Noncompliance

Plant Operations Manual (POM) Procedure 12.000.25, "Temporary Modifications" is currently being reviewed for approval; it will replace the current procedure 12.000.25T. The new procedure incorporates many of the practices of Institute of Nuclear Power Operations (INPO) OP-202. Specific features of the new procedure include:

- o The requirements for the use of temporary modifications are more stringent. Reflecting this change, the TMR form requires more explicit justification for and description of the temporary modification.
- o Each temporary modification is to be installed in accordance with POM 12.000.15, "PN-21 (Work Order) Processing." This ensures an additional verification of the safety-related classification. Safety-related work orders are reviewed by Nuclear Quality Assurance to determine inspection requirements.
- o The Fermi 2 Technical Engineer/designee will ensure that Temporary Modifications for safety-related systems or components receive a safety evaluation (10CFR 50.59.)

Personnel responsible for the preparation, review or approval of Temporary Modifications will be trained to the requirements of POM 12.000.25.

Corrective Action Taken to Avoid Further Noncompliance
(Cont'd)

Upon activation of POM 12.000.25, existing temporary modifications will be reevaluated to ensure their compliance with the new procedure.

Date When Full Compliance Will Be Achieved

Full compliance will be achieved when POM 12.000.25, "Temporary Modifications" is approved and activated. This activity will be complete prior to fuel load.

Statement of Noncompliance 84-37-03

10 CFR 50, Appendix B, Criterion XVI states in part that "in the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition".

Contrary to the above, corrective action for 50.55(e) Item 127 was inadequate in that the physical and administrative controls instituted to prevent re-entry of foreign material into the Residual Heat Removal Service Water reservoirs were ineffective.

Corrective Action Taken and Results Achieved

In May 1984, Detroit Edison reported the discovery of debris in the Residual Heat Removal Service Water (RHRSW) Reservoirs as 10 CFR 50.55(e) Item 127. The immediate corrective action included draining and cleaning the reservoirs, stricter enforcement of the Project Cleanliness Control procedures in the RHR Complex and improved control of the access to the open areas above the RHRSW reservoirs. Additionally, recognizing the difficulty of maintaining the cleanliness of large open areas during the construction phase, Detroit Edison committed to drain and inspect both RHRSW reservoirs when construction was complete. During the fulfillment of this commitment in October of 1984, additional debris was discovered in the reservoirs. Consequently, the roof and area gratings above the reservoirs were thoroughly cleaned and both reservoirs were cleaned and refilled.

Corrective Action Taken to Avoid Further Noncompliance

The possible sources of debris include: ineffective cleaning and inspection when the reservoirs were last drained, construction activities on the roof of the RHR complex, and sources from nature. Each of these possible sources has been evaluated, and Detroit Edison has concluded that the most probable source was ineffective implementation of housekeeping procedures during construction activities on the roof.

Corrective Action Taken to Avoid Further Noncompliance
(Cont'd)

The completion of construction in the RHR Complex has significantly reduced the traffic and activities in the areas above the open reservoir. Additionally, implementation of security controlled access from the RHR Complex to the areas above the reservoirs has limited access to the areas where debris could be introduced into the reservoirs.

Detroit Edison is also taking the following actions to prevent recurrence:

- o The requirements in POM Procedure 12.000.48, "Plant Housekeeping" for Zone III Cleanliness areas will be enforced for the roof and reservoir areas. During maintenance or modification activities in these areas, the cleanliness classification of the reservoir will be upgraded from Class D to Class C. Signs will be posted on the RHR roof area stating the cleanliness classification and requirements.
- o Cleanliness control for maintenance and construction activities in the areas above the reservoirs and in the reservoirs will be accomplished by cleanliness controls in the work packages.
- o An awareness program will be developed which will instruct the craft personnel on cleanliness and housekeeping requirements for those working the RHR complex, including the roof.
- o Detroit Edison will perform an evaluation of any item known to have fallen into the RHRSW reservoirs and not removed.

Date When Full Compliance Will Be Achieved

Full compliance will be achieved prior to fuel load.

Statement of Noncompliance 84-37-04

10 CFR 50, Appendix B, Criterion V, as implemented by DECo Quality Assurance Manual, QAP 9, requires that activities affecting quality shall be prescribed by appropriate written instructions and procedures.

Contrary to the above, Reactor Engineering Procedure 54.000.01, "Shutdown Margin Check", was not appropriate in that the calculational methods necessary for the determination of shutdown margin were inadequate.

Corrective Action Taken and Results Achieved

The procedure for the shutdown margin check requires that the results of several intermediate calculations be substituted into the final equation for calculating the shutdown margin. In this final equation, the intermediate values are identified by the step of the procedure in which the intermediate value is calculated. When a new step was added to the procedure and the following steps were re-numbered, an oversight resulted in the final equation not being modified to account for the change in the numbering of the steps. This error in the procedure would not have resulted in the calculation of an erroneous value for the shutdown margin; but it would have prevented the operator from performing the calculation.

The author of the change and the reviewers failed to recognize that individual steps had to be revised to reflect the renumbering of previous steps. Reactor Engineering Procedure 54.000.01, "Shutdown Margin Check" has been revised to correct this error.

Corrective Action Taken to Avoid Further Noncompliance

At the time of the NRC inspector's observations, Detroit Edison was already taking aggressive action to improve the procedure review and approval process. As discussed in the response to NRC Inspection Report 84-20, on October 11, 1984, a detailed surveillance of the procedure preparation and review process was conducted by Nuclear Quality Assurance. The surveillance, No. S-QA-P-84-722, was designed to determine whether or not the review process as specified in POM Procedure 12.000.07, "Plant Operations Manual Procedures" and Power Plant Order (PPO) EFP-1053 "Responsibilities for Reviewing Plant Operations Manual Procedures" is effective.

Corrective Action Taken to Avoid Further Noncompliance
(Cont'd)

As a result of this surveillance, Detroit Edison has placed special emphasis on improving the development and review of plant procedures. This effort is being focused by a thorough review and revision to POM 12.000.07, "Plant Operations Manual Procedures," which governs the development and approval of plant procedures. Specific improvements which address preventing the types of errors identified by the NRC inspector include:

- o Each safety-related procedure or change as identified in the approval column of the POM Index (i.e. SR) will be assigned to a technical reviewer who is not the author. This reviewer will check for the technical adequacy and correctness of the procedure. The reviewer will sign the coversheet showing approval prior to submission of the procedure to the On-Site Review Organization (OSRO) for final approval.

- o Power Plant Order (PPO) EFP-1053 has been revised to incorporate practical guidelines for procedure preparation and review. These guidelines will be consistent with and supplement the requirements of POM 12.000.07.

Date When Full Compliance Will be Achieved

Full compliance has been achieved.