Wayne H. Jens
Vice President
Nuclear Operations

Detroit Edison

Fermi-2
6400 North Dixie Highway
Newport, Michigan 48166
(313) 586-4150

September 27, 1984
EF2-69709

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 50-341/84-17

This letter responds to the item of noncompliance described in your Inspection Report No. 50-341/84-17. This inspection was conducted by Messrs. K. R. Naidu, Z. Falevits, A. Gautam and K. Tani on May 14-17, May 29 through June 1, and 29, 1984.

The item of noncompliance is 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 your report. The number for the item of noncompliance and the applicable criterion is referenced.

We trust this letter satisfactorily answers the concerns raised in your report. If you have questions regarding this matter, please contact Mr. Lewis Bregni, (313) 586-5083.

Sincerely,

Wayne H. Jens

cc: Mr. P. M. Byron
Mr. R. C. Knop
Mr. K. R. Naidu

THE DETROIT EDISON COMPANY

FERMI 2

NUCLEAR OPERATIONS ORGANIZATION

RESPONSE TO NRC REPORT NO. 50-341/84-17

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

INSPECTION AT: FERMI 2, NEWPORT, MICHIGAN

INSPECTION CONDUCTED: MAY 14-17, May 29-JUNE 1, 1984
JUNE 29, 1984

RESPONSE TO NRC INSPECTION REPORT NO. 50-341/84-17

Statement of Noncompliance, 84-17-01, Criterion V

10CFR50, Appendix B, Criterion V, as implemented by DECo Quality Assurance Manual, Section 9.0.1 requires that activities affecting quality be prescribed by appropriate written instructions and procedures and be accomplished in accordance with these instructions, procedures or drawings.

a. Contrary to the above, on May 16, 1984 the electrical craftsmen were observed performing a Raychem heat shrink application on safety related valve V4-2080, without previous training to perform this activity. The procedure used by the craftsmen to perform the application did not appear to be appropriate or applicable for this specific activity.

b. Contrary to the above an inadequate design review was performed on DCP T2301E01 Rev. A, dated January 16, 1983 relating to penetration backup fuses.

c. Contrary to the above, procedural requirements were not established and followed to identify that several safety related transmitters were calibrated to 0.5% accuracy instead of 0.25% accuracy committed to in the FSAR.

d. Contrary to the above, travellers and appropriate documentation were not adequately established to remove valve #V13-2322 and install valve V13-2396.

Corrective Action Taken and Results Achieved

Statement of Noncompliance 84-17-01 identifies four examples of activities affecting quality which were performed either without or not in accordance with written instructions, procedures or drawings. Detroit Edison's response addresses each of the specific examples cited and the proposed action to address the potential for programmatic deficiencies.

a. This item addresses two potential deficiencies observed during the application of Raychem heat shrink. The electrical craftsmen performing this installation had not received site specific training for this application. They appeared to be using a procedure that was not appropriate for that particular application of heat shrink.

While the situation was being investigated, Stop Work Orders SWO 84-001 and SWO 84-002 were issued by Detroit Edison on May 16, and May 18, 1984, respectively.

Corrective Action Taken and Results Achieved (Cont'd)

These Stop Work Orders halted the application of Raychem heat shrink until craftsmen were trained in this process.

By May 22, 1984, approximately 200 craftsmen and QC personnel had attended training consisting of a 90 minute Raychem training film and a 45 minute "in shop" session with an experienced Raychem instructor. Quality Control personnel have been issued a list of craftsmen trained in the application of Raychem heat shrink and are now required by procedure to verify that only trained personnel perform this work.

Detroit Edison investigated the NRC inspector's observation that craftsmen used the incorrect procedure and splicing kit for modifications to the limit switch compartment of the Limitorque operator on valve V4-2080. This investigation concluded that the correct procedure (3071-128-EQ-4-4) and correct splicing kit were used for this work.

Modifications to this Limitorque valve operator on valve V4-2080 were being performed under FMR-7043 Revision C, a generic FMR for this work inside the drywell, and FMR-S7178 Revision 0, which is specific to valve V4-2080. FMR-7043 requires that verbal concurrence from Qualification Engineering (QE) is obtained when selecting the method for making terminations. The valve specific FMR, No. S7178, required the use of STD-EQ-4-4 for heat shrink application which is specific to one particular type of cable termination. The inspector observed the QE Engineer and craftsmen with an information copy of specification STD-EQ-4-3 when they were attempting to determine which type of termination was most appropriate. During this discussion, the cables were connected and heat shrink loosely fitted over the splice to evaluate the merits of each configuration. The QE Engineer and craftsmen determined that STD-EQ-4-4 was most appropriate and the correct procedure and splice kit were obtained prior to performing this work.

Detroit Edison has concluded that the correct procedure was used because:

Corrective Action Taken and Results Achieved (Cont'd)

- The correct procedure, 3071-128-STD-EQ-4-4 was obtained from document control by the craftsmen at the time the work was performed. The Document Control seven day issue stamps verify that this was done.

- Raychem installations were witnessed by QC. Both QC inspectors involved verified the use of the correct procedure.

- The work package was reviewed and the incorrect procedure was not part of the package.

b. This item addresses the concern that the design review of Design Change Package (DCP) T2301E01 Revision A, Penetration Backup Fusing Protection, did not identify instances of improperly sized fuses or improperly designed fuse protection.

As a result of the discrepancies and the need to ensure that similar problems are identified and corrected, Electrical Engineering put a hold on issuance of the drawings which were in the process of being reviewed for DCP incorporation. This was done to make a design re-verification of the installations which are construction complete. Design Change Notices, DCN 10616 and DCN 10649, were issued to make the required modifications. This work is now construction complete.

Generic Test Procedures CAI0.000.059 "Electrical Scheme Checkout Procedures," and CAI0.000.026 "Motor Control Centers," have been revised to require that all fuse sizes are verified during acceptance testing.

c. This item addresses the concern that a number of safety related transmitters were calibrated to an accuracy less stringent than that specified by the manufacturer while the question regarding the required calibration accuracy was being resolved. Formal methods were not followed to ensure that the discrepancy was controlled and resolved.

Test equipment with the required accuracy to calibrate the subject instruments was not on hand at the time of initial calibration. The instrument Specification Sheets were revised to permit calibration to a less stringent accuracy than "1.0 times manufacturer's accuracy" in order to permit use of the test equipment which was on hand at the time.

Corrective Action Taken and Results Achieved (Cont'd)

Concurrently, discussions were held between the Nuclear Production Technical Group and Project Engineering to resolve questions regarding the required calibration accuracy. As part of this discussion, Nuclear Production requested written concurrence from Engineering regarding the action taken in the initial calibrations of the subject instruments. Engineering's response, EF2-67345, required that the subject instruments be calibrated to the manufacturer's stated accuracy.

Nuclear Production was preparing a response to EF2-67345, when the situation was noted by the NRC Inspector. A review of the QA-I and Technical Specification instrument folders was in progress to identify those instruments which were not in compliance with the calibration tolerence specified by Engineering.

Detroit Edison is conducting a review of the calibration accuracy which has been used to calibrate each safety related instrument to date. All safety related instruments which have not been calibrated to the manufacturer's stated accuracy are being identified and punchlisted for recalibration.

d. This item addresses a contractor's failure to follow established procedures in that work was performed by craftsmen without the required design documents. Prior to installation, valve V13-2322 was determined to be unacceptable and FMR-S2729 was written to install valve V13-2396 in its place. Valve V13-2396 was welded in place 1 day before this FMR was issued and 39 days before the FMR was incorporated into the work traveler. At the time the work was performed, craftsmen did have an approved DDR which was dispositioned to require that they substitute the identical valve, V13-2396, for the one in the original design. The traveler fabrication drawing for installation reflected the original valve designator (V13-2322), but gave the correct (new) heat number for the new valve (V13-2396). Additionally, the traveler package was not stored in the QA vault. The "N-5" form was in the vault and was found to be complete and accurate.

A Nonconformance report was issued to document and disposition the discrepancies described above. Detroit Edison Field Engineering reviewed all pertinent documentation associated with this work and verified that

Corrective Action Taken and Results Achieved (Cont'd)

the proper valve was installed. Based on this review, it was determined that the final installation conforms with specified design requirements and was acceptable.

The traveler package was not stored in the QA vault at the time of the inspection because it had not been reviewed by the contractor's QA organization and, therefore, had not been turned over to Detroit Edison. All Wismer and Becker traveler packages were reviewed prior to the contractor's demobilization and are now stored in the vault.

Corrective Action Taken to Avoid Further Noncompliance

Due to the diverse nature of the cause of each of the examples identified, the corrective action taken to avoid further noncompliance is specific to each example:

a. Procedures have been issued which require that QC inspectors verify that electricians applying Raychem heat shrink have the appropriate training.

   Detroit Edison is identifying procedures and specifications which involve the application of Raychem Heat Shrink. These procedures will require that craftsman receive appropriate heat shrink application training as specified by the Maintenance Manager.

b. To resolve inconsistencies in fusing practices and to ensure that design requirements are met:

   - Safety related fusing criteria will be controlled via a new Section (EJ) to Specification 3071-128 which will contain a computer list giving the pertinent parameters and the installed positions for plant power and control fuses.

   - Safety related fusing (new designs) or modifications to design will be reviewed and controlled by fuse calculations and as listed in Section EJ of Specification 3071-128.

   - Discrepancies between installed fuses and the drawing will be resolved as follows: 1) the Specification will become the lead document; and, 2) fusing information will be removed from the

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

drawings with a note added to the drawing referring to the Specification. This will limit the identification of proper fusing to one source.

- Operations Administrative Procedure 21.000.01, "Shift Operations and Control Room" is being revised to include a requirement that whenever returning a system to service, verification of proper fuses installed, including unique marking, in each position will be required when electrical protective tagging is removed or when performing initial electrical line-ups.

- General Administrative Procedure 21.000.43, "Verification of Correct Performance of Operating Activities" is being revised to stipulate that checking that proper fuses are installed, including unique markings, will be part of the independent verification performed on any electrical device being returned to service.

- Direction has been provided by Nuclear Production to assure that all fuses once properly installed will be so maintained for the life of the plant.

- Prior to fuel load, Nuclear Production will walk down all safety related fuses and verify that the correct fuses, as specified in Specification 3071-128 Section EJ, are installed. Tags identifying the proper type and size of fuse will be installed.

c. Revision 7 of I&C Administrative Procedure 41.000.11 which has been approved, provides clarification of the instrument accuracy requirements. Section 4.1.1.1 of this procedure provides that the "As Left" calibration accuracy for QA-I or Technical Specification instrumentation shall not be less conservative than 1.0 times the manufacturer's guaranteed accuracy, except as approved by Nuclear Engineering.

d. Work authorization and administrative control procedures which are currently in place control the performance of work and will prevent the recurrence of this problem.

Date When Full Compliance Will be Achieved

a. The verification walk down for all safety related fuses will be completed prior to fuel load and will be per Nuclear Operations Administrative Procedures 12.000.21 and General Administrative Procedures 12.000.43. For all other aspects of this item, Detroit Edison is in full compliance as specified in Detroit Edison's corrective action.

b. All QAI and Technical Specification instruments will be calibrated to 1.0 times the manufacturers stated accuracy except as approved by Nuclear Engineering prior to fuel load.

c. Full compliance has been achieved as stated in Detroit Edison's corrective action.