U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report No. 50-341/80-20 License No. CPPR-87

Docket No. 50-341

Licensee: Detroit Edison Company
2000 Second Avenue
Detroit, MI 48226

Facility Name: Enrico Fermi Nuclear Station, Unit 2

Inspection Conducted: November 12 - 14, 1980

Inspector: P. A. Barrett RC Knop for 12/9/80

Approved By: RC Knop 12/9/80
R. C. Knop, Chief
Projects Section 1

Inspection Summary

Inspection on November 12-14, 1980 (Report No. 50-341/80-20)
Areas Inspected: Observation of in-process testing of electrical equipment; discussion about . ' observation of electrical cable installation activities; and review of audits concerning electrical activities. The inspection IN_ volved 21 inspector-hours onsite by one NRC inspector.
Results: Of the areas inspected, two items of noncompliance were identified. (One Severity Level IV, Supplement II - permitting cable installation activities to continue with a known inadequacy; and one Severity Level VI Supplement II - not performing actual audits on electrical activities in the plant).

DETAILS

Persons Contacted

E. Wermann, Construction QA
J. C. Ard, Jr., Daniel International Corp. Project Manager
W. C. Morrison, QA Engineer
H. O. Arora, Acting Startup Engineer
T. S. Nickelson, Acting Startup Director
L. B. Collins, Lead Startup Test Engineer - Electrical
E. K. Graybill, Acting Project Manager, L. K. Comstock Co.
J. Mattox, Engineering, L. K. Comstock
B. Seltmann, Quality Control Supervisor, L. K. Comstock

Resident NRC Inspector

B. H. Little
P. M. Byron

All of the above attended the exit interview on November 14, 1980.

Functional or Program Areas Inspected

1. Observation of In-Process Testing of Electrical Equipment

   The RIII inspector observed the in-process high potential test of the secondary windings and the development of the data for the excitation reference curve for the current transformer located in switchgear bus 65F position F10 (associated with the core spray pump). The test was performed and the data was developed in accordance to Checkout and Initial Operations Test Procedure #CAIO.000.028 Revision 2. A discrepancy in the current transformer polarity marks indicated on the construction prints was identified by the licensee and appropriately documented on Design Deviation Report (nonconformance) No. SUE-0206.

   No items of noncompliance or deviations were identified.

2. Observation and Discussion of In-Process Cable Installation Activities

   a. On November 12, 1980 the RIII inspector went into the plant to observe in the in-process installation of a group of instrument cables installed sumultaneously (bulk pull). The group including seven Class 1E cables (#231275-2k, 231272-2K, 231276-2K, 231273-2K, 255922-2K, 255858-2K, and 255928-2K) and three non-Class 1E cables (#255926, 240105, and 255921).

      The group had been partially installed (pulled) and were laid on the floor to prepare for the next segment of the pull.

A discussion, with the personnel involved in the pull, revealed that there had been a problem with this type (bulk) of pull the week before, which resulted in a broken cable. The problem was that a safety device (tensiometer or pulling link) used to prevent excessive tension on cables pulled through conduit, could not be attached at intermediate pull points in the routing. Thus, the cables were pulled by hand without a safety device. Quality Control personnel determined that the individual cables might be overtensioned and notified Detroit Edison Engineering. The instructions from Engineering were to continue the pull and document the pull activities on a DDR (nonconformance report). The pull was continued and cable #255849-2C broke in half. The pull activities were then stopped by QC and DDR #1034 dated November 7, 1980, was initiated describing the above events. As of November 12, 1980, correction action to DDR #1034 had not been dispositioned or taken.

The discussion with the QC personnel involved with the bulk pull of November 12, 1980 indicated that the same deficient practice of pulling part of the cables by hand without a safety device would be allowed for the November 12, 1980 bulk cable pull. Failure to properly implement the quality assurance program, in that corrective measures were not taken to a known deficiency before proceeding with the work activity, is contrary to the requirements of 10 CFR 50, Appendix B, Criterion II and the Enrico Fermi Unit 2 Quality Assurance Manual, Section 1.0.1 as described in Appendix A to the transmittal letter to this report. (341/80-20-01)

The licensee will take the following actions relative to the above noncompliance:

(1) Determine how many other cables have been installed in this deficient manner and take commensurate corrective action.

(2) Document the stop work order issued on November 13, 1980 concerning these installation activities.

(3) Determine the reason QC decided to allow the deficient pull activities to continue; determine any other activities that may be effected by a similar decision; and take measures to preclude this type of a decision in the future.

b. The RIII inspector discussed the controls used by the licensee to assure that the cable pulls links would prevent excessive tensions on cables during installation. The electrical contractor had discovered that at one time, links had been identified onsite which were not traceable to an approved vendor. The contractors' corrective action was to retrieve and hold all of the questionable links. The above actions are documented on LKC Field Surveillance Correction Report #1656.

The licensee has agreed to take the following additional actions:

(1) Identify any safety cable that was installed using the questionable links and take any necessary corrective actions.

(2) Determine how the unapproved links got onto the site and take appropriate actions to prevent recurrence.

This item is unresolved (341/80-20-02).

From a review of link quality certifications and a discussion with the electrical contractor, the pull links presently onsite appeared to qualify to break at an adequate tension to protect the cables being installed.

3. Audit Review

The RIII inspector reviewed the audits performed by Detroit Edison and Daniel International of L. K. Comstock (the electrical contractor) during the past 14 months. (August 1980 to October 1980)

Audits were available in the areas of purchasing, nonconformances, fabrication shop activities, design changes, organization, procurement, and warehouse storage.

A log was reviewed which indicated several surveillances of specific in-plant activities performed by L. K. Comstock. However, the licensee could not provide a comprehensive audit of the L. K. Comstock in-plant construction activities which had been performed during the past 14 months. This is contrary to the requirements of 10 CFR 50, Appendix B, Criterion XVIII and the Enrico Fermi Unit 2 Quality Assurance Manual, Section 19.0.1 as described in Appendix A to the transmittal letter to this report. (341/80-20-03)

Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether or not they are acceptable items, items of noncompliance, or deviations. An unresolved item disclosed during this inspection is discussed in paragraph 2.b.

Exit Interview

The inspectors met with the licensee representatives on November 14, 1980. The inspectors summarized the scope and findings of the inspection. The licensee acknowledged the findings as reported.