

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

REGION III

Report No. 50-341/78-19

Docket No. 50-341

License No. CPPR-87

Licensee: The Detroit Edison Company
2000 Second Avenue
Detroit, Michigan 48226

Facility Name: Enrico Fermi Nuclear Power Station, Unit 2

Inspection At: Fermi Site, Monroe, Michigan

Inspection Conducted: November 27-30, 1978

F.G.B. for J. Hughes
Inspectors: J. Hughes

1-9-79

P.A. Barrett
P. A. Barrett

1-9-79

R.L. Spessard
Approved By: R. L. Spessard, Chief
Engineering Support Section 1

1-9-79

Inspection Summary

Inspection on November 27 through 30, 1978 (Report no. 50-341/78-19)

Areas Inspected: Electric cable terminations; personnel training; contractor QA/QC program; review of document records; and licensee action on previous inspection findings. The inspection involved a total of 50 inspector-hours onsite by two NRC inspectors.

Results: No items of noncompliance were identified.

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DETAILS

Persons Contacted

Principal Licensee Employees

- *E. Hines, Assistant Vice President and Manager Quality Assurance
- *W. Everett, Project Superintendent
- *T. A. Alessi, Director Quality Assurance
- *H. A. Walker, Project Quality Assurance Engineer
- *W. Colbert, Project Engineer
- *C. R. Bacon, Field Project Engineer
- *J. D. Ryan, Project Site Quality Assurance Engineer
- *W. A. Fahmer, Project Manager
- *A. Alexiou, Assistant Project Superintendent
- P. Cribbs, Quality Assurance Engineer
- G. Carter, Quality Assurance Engineer

Other Personnel

- *D. E. Seifert, Project Manager, Daniel International Corporation (DIC)
- *J. G. Bolt, Project Quality Assurance Manager, DIC
- *C. B. Bliesener, Project Quality Control Manager, DIC
- *J. G. Conner, Project Electrical Manager, DIC
- *C. W. Kostbade, Electrical Quality Control, DIC
- *L. F. Hack, Quality Control Manager, L. K. Comstock
- T. N. Woodman, Project Manager, L.K. Comstock
- G. King, Electrical Quality Assurance Engineer, DIC

The inspectors also talked with and interviewed several other licensee and contractor employees, including members of the quality, technical, and engineering staffs.

*Denotes those attending the exit interview.

Licensee Action on Previous Inspection Findings

(Closed) Unresolved Item (341/78-08-06): Electrical contractor's QA/QC program breakdown and Daniel International Corporation's (DIC), show cause letter dated May 24, 1978. DIC issued an extension of the interface program until October 1, 1978. For additional information concerning this matter, refer to paragraph 5 of this report.

(Closed) Unresolved Item (341/78-13-02): Installation of rigid conduit mounted to seismic Class I equipment. The licensee issued a field modification design, S-830 dated September 20, 1978, which requires that all rigid conduit entering Class I equipment be modified to have flexible conduit at termination.

(Closed) Unresolved Item (341/78-13-03): Two Limitorque valve operators (motors), were not staked or crimped in two places in accordance with manufacturer's instructions book, SMBI-170. The RIII inspector reviewed DIC's repair/maintenance log for staking the lock nuts of Limitorque operators (motors) and found it acceptable.

(Closed) Unresolved Item (341/78-10-05): Internal audits performed by the L. K. Comstock Corporate office were in the format of an evaluation report. The RIII inspector reviewed recent L. K. Comstock audits and determined them to be in an audit format.

(Closed) Noncompliance (341/78-10-01): Measures not established to control conduit fill requirements. The RIII inspector reviewed Design Change Notice (DCN) No. 1084, Revision A. The notice specified a numbering system and controls which would control the cited conduit fill requirements. A letter, Control No. LKC-QC-371 dated September 25, 1978, from the L. K. Comstock QA Manager to Detroit Edison QA indicated training relative to DCN No. 1084. L. K. Comstock Work Instruction No. 000-03-008 has been revised to reflect DCN No. 1084. The aforementioned actions are consistent with those described in DECo's response letter dated September 1, 1978.

(Open) Noncompliance (341/78-10-02): Nonseismic fire main pipe installed across redundant Class 1E cable tray systems. Design change Notice No. 1265 dated October 2, 1978, has been written to modify the fire main pipe over the cited trays to seismic qualifications. The design procedure to prevent this type of situation from recurring has not been completed. Letters, EF2-41985 and EF2-42119, indicate that the scope of the procedure is being developed. The aforementioned actions are consistent with those described in DECo's response letter dated September 1, 1978, except for scheduled completion dates.

(Closed) Unresolved Item (341/78-10-03): Separation criteria for Division 1 Cable No. 235625-1C being pulled into a Division 2 control panel. Design Change Notice (DCN) No. 1222 dated October 2, 1978, has been written to specify the separation criteria for the above condition inside the panel. DCN No. 265 will be followed for all cable separation outside the panel. The modification specified on DCN No. 1222 has not been completed, but is controlled per L. K. Comstock Field Surveillance Correction Report No. 1096 dated November 29, 1978.

(Closed) Followup Item (341/78-09-14): Design changes were not posted on applicable documents as specified. Daniel International Audit Finding Report (AFR) No. 78-05-35D had already identified this situation. During this inspection, the RIII inspector verified AFR No. 78-05-35D had been properly closed out and the cited design changes had been properly posted or incorporated.

(Open) Unresolved Item (341/78-09-15): Measures to control reinspection activities necessitated by design changes and performed by L. K. Comstock. Measures have not been established. However, Daniel International correspondence, DIC 8-6811 and DIC 8-7840, documents activities to develop the measures. The licensee stated that the measures should be developed within four to six weeks.

(Open) Unresolved Item (341/78-09-16): Measures to control reinspection activities necessitated by design changes and performed by General Electric Installation and Service Engineers, GEI&SE. The number of design changes affecting GEI&SE has increased substantially in the past six months. Therefore measures are being developed to control reinspection activities. The measures should be developed within four to six weeks.

(Closed) Unresolved Item (341/78-13-01): Seismic qualifications of spade lugs in General Electric supplied Class IE Panels. The RIII inspector reviewed and discussed Audit Report EF2-44324 performed September 27 through 29, 1978. The audit summary indicated that seismic test documentation for Combination Operating Panel No. H11-P602 was reviewed and found satisfactory. The tests were performed using spade lugs. Seismic reports, for the GE supplied cabinets mounted in the relay room and local racks and panels, were not available to the auditors during the audit period. Therefore, the auditors identified the remaining seismic reports as an open item to be evaluated during a followup audit.

Functional or Program Areas Inspected

1. Observation of Recent Electrical Work Activities

- a. The RIII inspector observed the following completed or being completed cable terminations:

Cable No. 214220-2C	from end
Cable No. 201823-2P	to and from ends
Cable No. 213751-1C	to and from ends
Cable No. 212791A-2P	from end
Cable No. 214301-2C	to and from ends
Cable No. 214401-2C	to end

The following termination characteristics were in accordance with the pull cards, L. K. Comstock Work Instruction No. 000-03-019 dated May 15, 1978, and Detroit Edison Specification No. 3071-128 Standard No. EA-3-1:

Cable supports, color/numeric code, crimped lugs, conductors identified, conductors properly dressed, conductor inserted into lug at proper length, and terminal connections tight.

- b. The RIII inspector observed the following four installed Class 1E cables in wireway: No. 214301-2C, 204571-2P, 200597-2C and 204551-2P.

The cables were properly routed in accordance with the pull cards. The raceways were free of sharp edges and grounded. Separation criteria, identification, bend radius, and sealed cable ends were in accordance with L. K. Comstock Work Instruction No. 000-03-008 dated July 21, 1978, and related documents.

No items of noncompliance were identified.

2. Record Review of Recent Electrical Work Activities

The RIII inspector reviewed the following records concerning the aforementioned observed installations:

- a. Cable Pull Cards and Cable Pull Checklists (L. K. Comstock Form No. 37) for cables No. 214301-2C, 204571-2P, 200597-2C, and 204551-2P.
- b. Control/Instrument Cable Termination Inspection Checklist (L. K. Comstock Form No. 36) for cables No. 214220-2C (from end), No. 213751-1C (from and to ends), 214301-2C (from and to ends), and 214401-2C (to end).
- c. Power Cable Termination Inspection Checklist (L. K. Comstock Form No. 46) for cables No. 201823-2P (from and to ends) and No. 212791A (from end).

The records identified the QC inspector, the type of observation, the governing documents, the results, the acceptability, and action taken in connection with noted deficiencies. The records were identifiable and retrievable.

No items of noncompliance were identified.

3. Nonconformance/Deviation Records

- a. Nonconformances are recorded on Deviation Disposition Requests (DDR) forms.
- b. Six-DDR's pertaining to the station batteries and associated equipment were reviewed by the inspector including: DDR(E) 2220, (E) 1408, (E) 1855, (E) 1963, and (E) 2195 and DDR-RW-EI-L.
- c. All of the DDR's, were legible, retrievable, and indicated status, i.e., a lack of signature indicated not approved nor closed out.

No items of noncompliance were identified.

4. Electrical Components - Review of Quality Records

- a. The RIII inspector selected battery racks, 125VDC MCC, battery chargers, and 130/260VDC fuse cabinets for the quality record review.
- b. During review of document packages, in 4.a. above, the inspector determined that seismic and other required certifications conformed to procurement requirements for Class IE equipment.

No items of noncompliance were identified.

5. Electrical Contractor's QA/QC Program (Unresolved Item 341/78-08-06)

The RIII inspector reviewed the report of Danial International Corporation (DIC)/Detroit Edison Company (DECo) QA audit of the electrical contractor performed on October 30, 1978. The inspector verified that L. K. Comstock's (LKC) QA/QC programmatic breakdown, which was identified in April 1978, has been corrected. The inspector reviewed a summary of DIC Audit Finding Reports (AFR) of the past seven months and determined that answers to the original thirty-seven AFR's have been submitted to DIC's QA department for close-out; thirty-six have been closed. Also, LKC's training program was reviewed and determined to be satisfactory. The inspector questioned DECo's site QA Manager and DIC's Project QA Manager relative to their assesement of LKC's progress during the past seven months. The consensus was that LKC has their QA/QC program under control. In conclusion, the DIC Show Cause Letter (DIC 8-271) to LKC was lifted; electrical construction activities are in progress. The inspector has no further questions on this item at this time.

No items of noncompliance were identified.

Exit Interview

The inspector met with staff representatives (denoted in the Persons Contacted paragraph) at the conclusion of the inspection on November 30, 1978. The inspector summarized the scope and findings of the inspection. The licensee acknowledged the information.