



THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

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MURRAY R. EDELMAN

VICE PRESIDENT
NUCLEAR

February 17, 1983

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

RE: Perry Nuclear Power Plant
Docket Nos. 50-440; 50-441
Response to I.E. Report

Dear Mr. Keppler:

This letter is to acknowledge receipt of Inspection Report Number 50-440/82-15; 50-441/82-14, attached to Mr. Norelius' letter dated January 28, 1983. This report details the results of the review conducted by Mr. K. R. Naidu from November 1-4, 1982, of corrective action taken relative to certain items of noncompliance disclosed in Inspection Report Number 50-440/81-19; 50-441/81-19 forwarded by your letter dated September 27, 1982.

In our attachment to this letter we are forwarding additional information or a description of additional actions to be taken for five of the items required by IE Report 50-440/82-15; 50-441/82-14.

As discussed by Mr. E. Riley of The Cleveland Electric Illuminating Company with Messrs. J. E. Konklin and C. C. Williams of your office on February 16, 1983, supplemental information for Noncompliance 440/81-19-19; 441/81-19-19, will be submitted, after completion of the review presently scheduled for the week of February 28, 1983.

This response has been submitted to you within 20 days, as you requested. Please call if there are additional questions.

Sincerely,

Murray R. Edelman
Vice President - Nuclear Group

MRE:pab

cc: Mr. M. L. Gildner
NRC Site Office

U.S. Nuclear Regulatory Commission
c/o Document Management Branch
Washington, D.C. 20555

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RESPONSE TO ENFORCEMENT ITEMS

As requested in United States Nuclear Regulatory Commission IE Report 50-440/82-15; 50-441/82-14, the following information is provided to clarify certain of our responses to the Notice of Violation appended to United States Nuclear Regulatory Commission IE Report 50-440/81-19; 50-441/81-19.

I. Noncompliance 440/81-19-01c; 441/81-19-01c

A. Severity Level IV Violation states in part:

10CFR50, Appendix B, Criterion V, states in part, "Activities affecting quality shall be prescribed by documented instructions, procedures, and drawings of a type appropriate to the circumstances... and shall be accomplished in accordance with these instructions, procedures..."

Subitem c. Paragraph 5.2.6 of the L. K. Comstock Procedure No. 4.11.1, Nonconformance Items and Corrective Action, states in part, "Initiated NRs may be voided by the QA Manager or his designee..."

Contrary to the above, L. K. Comstock Nonconformance Reports No. 531 and No. 454 (dated February 25, 1981, and November 21, 1980, respectively) were voided by QC inspectors who were not authorized to do so.

B. Results of the November 1-4, 1982, inspection:

The NRC Inspector informed the licensee that three of five nonconformances reviewed were still not adequately corrected. He further assessed that "...surveillance activity documented in SE-945 was inadequate in that procedural requirements of LKC Procedure 4.11.1 were not verified in its entirety but was limited only to verify a valid signature."

C. Revision to Initial Response from October 27, 1982, Letter.

1. Corrective action taken and results achieved:

Action Request #455 was generated by Construction Quality Engineering (CQE) and has since been verified and closed out. The L. K. Comstock (LKC) Quality Control Manager has signed, reviewed, and verified the previous improperly voided nonconformance reports. A subsequent review was then conducted by the LKC Quality Control Manager to assure that reasons for voiding were also properly documented.

2. Corrective action taken to avoid further noncompliance:

LKC Procedure 4.11.1 has been revised to clarify voiding requirements and training to the revised procedure has been conducted and documented.

3. Date when full compliance will be achieved:

Full compliance was achieved by December 20, 1982, upon completion of the additional review required to resolve the inspector's concerns.

D. Subsequent Review:

Mr. Naidu reviewed additional actions taken by the licensee during his inspection from February 1-3, 1983. This included evidence that LKC had reviewed the voided nonconformance reports, provided reasons for voiding and posted the proper signatures.

Preliminary results presented at his exit meeting indicate that this item is considered closed.

II. Noncompliance 440/81-19-03a; 441/81-19-03a

A. Severity Level IV Violation states in part:

10CFR50, Appendix B, Criterion X, states in part, "A program for inspection of activities affecting quality shall be established and executed by or for the organization performing the activity to verify conformance with the documented instructions, procedures, and drawings for accomplishing the activity."

Subitem a. CEI Corporate Nuclear Quality Assurance Program, Section 1000, Paragraph 1.1 states in part, "A program for inspection shall be established by CEI to ensure that all safety-related components...affecting those items meet the required quality standards."

Contrary to the above:

- 1) The electrical contractor failed to inspect the inside diameter of the containment vessel nozzles and the concrete shield wall penetrations to verify that concentricity and/or dimensional tolerances were within the limits established by the manufacturer.
- 2) An inspection program to verify the adequacy of installation of the 4160 volt/480 volt switchgear and the 480 volt Motor Control Centers (including the sequence of assembly such as, shimming, torquing of bolts, fitup and welding) was not established and therefore not performed.

B. Results of November 1-4, 1982, inspection.

Mr. Naidu conducted a preliminary review of this noncompliance with the licensee during his November 1-4, 1982, inspection.

His assessment states in part that the revised procedure (LKC Procedure 4.3.4) and the checklists were inadequate, and that the licensee agreed to revise the procedure....

- C. Revision to Initial Response from October 27, 1982, letter modified by January 21, 1983, letter.

Subitem a.1)

1. Corrective action taken and results achieved:

LKC Procedure 4.3.10 has been revised to clarify penetration installation inspection criteria. Per revised Westinghouse installation instructions, the installation dimensions and tolerances documented on Field Questions 12159, 12173, 12230, 12249, and 12295 were evaluated and determined to be acceptable by Nuclear Construction Engineering Section. A plan was developed to address the adequacy of inspection for the Unit 1 penetrations.

Penetration inspection records were reviewed by the Project Organization Engineering Group and found to be incomplete. The contractor is in the process of completing the records and Pullman Power Products has supplied LKC with the documentation to address Project Organization Engineering questions. This was accomplished by December 15, 1982.

However, during the LKC receipt and review of this supplemental material, a number of questions arose which required further discussion. Pullman Power Products and LKC are meeting to resolve these questions and it is anticipated that resolution will be achieved by March 15, 1983.

2. Corrective action taken to avoid further noncompliance:

Unit 2 penetrations are being installed to revised LKC Procedure 4.3.10 for which training has been completed and documented.

3. Date when full compliance will be achieved:

This item is now expected to be resolved by March 15, 1983, and therefore full compliance will be achieved by March 15, 1983.

Subitem a.2)

1. Corrective action taken and results achieved:

Programs were established to verify adequate installation inspections of the 4160 volt/480 volt switchgear, the 480 volt motor control centers (MCC) and 480 volt unit substations (including the sequence of assembly such as shimming, torquing of bolts, fitup and welding) and reverification was completed by January 14, 1983. As a result of the reverification, dispositions to several Nonconformance Reports are awaiting vendor concurrence and are the last outstanding items requiring address for response a.(2).

2. Corrective action taken to prevent further noncompliance:

Any subsequent equipment installation will be performed in accordance with the revised LKC Procedure 4.3.4. The related concern identified in IE Report 50-440/82-15; 50-441/82-14 on inadequate checklists was addressed by revision to associated LKC Procedure 4.8.18.

3. Date when full compliance will be achieved:

All actions described in the October 27, 1982, letter had been completed by January 14, 1983, and implementation of revised LKC Procedure 4.8.18 was effected by February 16, 1983. Full compliance was therefore achieved by February 16, 1983.

D. Subsequent actions:

A status update was communicated to Region III on January 21, 1983, regarding the penetration document review and the reverification programs for the Switchgear, Unit Substation and Motor Control Centers. The update stated that further discussion was proceeding to resolve review comments for the penetration document package (Subitem a.1). A March 15, 1983, date is projected for comment resolution.

III. Noncompliance 440/81-19-03b; 441/81-19-03b

A. Severity Level IV Violation states in part:

10CFR50, Appendix B, Criterion X, states in part, "A program for inspection of activities affecting quality shall be established and executed by or for the organization performing the activity to verify conformance with the documented instructions, procedures, and drawings for accomplishing the activity."

Subitem b. The electrical contractor's (L. K. Comstock) Cable Pulling Procedure, Section 4.3.3.1.10, requires verification that raceways are clean and free from abrasions and sharp edges which might cause cable damage during cable installation.

Contrary to the above, the NRC inspectors observed sharp edges and burrs in the following cable trays:

- . Tray B1313, elevation 604'.
- . Tray B1303, elevation 574'.
- . Tray B1324, elevation 620'.
- . Tray A3021, elevation 620'.

Several safety-related cables had been installed in cable trays B1324 and B1303.

B. Results of November 1-4, 1982, inspection.

A revised response as reflected below was submitted on November 10, 1982. Additionally, cable tray B-1303 was inspected by LKC and found to be acceptable. This is documented on LKC Inspection Report 4117.

C. Revision to Initial Response from October 27, 1982, letter as modified by November 10, 1982, letter.

1. Corrective action taken and results achieved:

LKC NR 1070 was generated to document the condition of cable tray B1324. Other cable trays in question were documented on LKC and Project Organization (Construction Quality Section) inspection reports and evaluated to be acceptable.

2. Corrective action taken to prevent further noncompliance:

LKC Procedure 4.3.3 was evaluated in order to determine its adequacy. No procedure revision was necessary. In addition, as a part of the evaluation, Nonconformance Reports written to document damage to cables were reviewed. None were related to sharp edges or burrs on cable trays. Based on the fact that no negative trend could be identified in this area, this condition is not considered to be generic, but represents an isolated case.

3. Date when full compliance will be achieved:

Full compliance was achieved by November 10, 1982.

D. Subsequent Review:

This item was reviewed again by Mr. Naidu during his inspection activities on February 1-3, 1983. Preliminary results presented at his exit meeting indicate that this item is considered closed.

IV. Noncompliance 441/81-19-03c; 441/81-19-03c

A. Severity Level IV Violation states in part:

10CFR50, Appendix B, Criterion X, states in part, "A program for inspection of activities affecting quality shall be established and executed by or for the organization performing the activity to verify conformance with the documented instructions, procedures, and drawings for accomplishing the activity."

Subitem c. LKC's Cable Tray Installation Inspection Checklist Form #17, Item 1.6, requires verification that bolts are tight on splice joints.

Contrary to the above, the following cable trays contained improperly seated bolts:

- 1) Cable tray A1699 located at Column Line D-11 at elevation 599' in the Auxiliary Building. Three out of eight splice bolts observed were not properly seated. This cable tray contains cables.
- 2) Cable tray 1E21H1A located at Column Line F-8 at elevation 579' in Room No. 2 of the Auxiliary Building. Two out of eight splice bolts observed were not properly seated.

B. Results of November 1-4, 1982, inspection.

The NRC Inspector noted that the licensee's response stated that an inspection program was developed to reverify on a sample basis the adequacy of installation of bolts. He further stated that the licensee was unable to demonstrate that any recognized standard approaches were used to select the sample size and unable to identify the technique used in selecting the random sample. The NRC Inspector also stated that the licensee did not address the lack of inspection records which should have verified that splice plate bolts were torqued.

C. Revised Response.

1. Corrective action taken and results achieved:

This condition is also documented on Nonconformance Report CQC 2344 initiated September 11, 1981 (see also Noncompliance 440/81-19-01e; 441/81-19-01e). As a result of this Nonconformance Report and based on cable tray splice plate bolt tests conducted by the Project Organization on December 2, 3, and 10, 1981, it was concluded by Engineering that a problem existed with certain installation parameters of previously installed tray splice bolts. A walkdown of several tray installations was later conducted by NRC Inspectors for site personnel on March 17, 1982, to illustrate that there was a potential problem with the seating and grinding of cable tray splice bolts. At that time, it was agreed upon that a full scale inspection of all tray splice bolts installed prior to September 21, 1981, would be made.

After the Contractor's QC had begun the inspection process, an engineering review of the preliminary data indicated that the decision to reinspect all the splice bolts may have been premature. So a revised inspection criteria of 8000 bolts was decided upon as a sample basis to determine if a real problem existed or not. The reinspection was 50 times more intense than the original NR inspection. The 8000 bolt sample size was not intended by Engineering to be a statistical rigorous sampling

program but only an inspection to see if a full scale reinspection was warranted. The breakdown of the 8000 bolts was to focus the reinspection effort on those areas that contained the highest concentration of previously installed cable tray. If review of the reinspection data had indicated to Engineering that a problem did exist, a complete reinspection of all cable tray splice bolt installations would have been conducted. However, the Contractor's QC report of 6/17/82 indicated that only 2 plates out of the 1000 inspected (0.2%) had potential problems (based on the manufacturer's tests indicating that 25% of the bolts from a connection could be physically missing without affecting the connection strength as documented in the B-Line test report letter of May 5, 1982). Therefore, it is Engineering's position that the 8000 bolt sample size was justified in this case. The sampling verified that a real installation problem did not exist and that reinspection of all previously installed splice bolts was not warranted. NR CQC 2344 was then closed.

2. Corrective action taken to avoid further noncompliance:

LKC Procedure 4.3.1 was revised to clarify inspection requirements for torquing of cable tray splice plate bolts.

3. Date when full compliance will be achieved:

This item was considered to be resolved on October 27, 1982, with all action completed. Full compliance has therefore been achieved.

D. Subsequent Review.

None conducted yet.

V. Noncompliance 440/81-19-11; 441/81-19-11

A. Severity Level IV Violation

10CFR50, Appendix B, Criterion V, states in part, "Activities affecting quality shall be prescribed by documented instructions, procedures, and drawings of a type appropriate to the circumstances... and shall be accomplished in accordance with these instructions, procedures..."

- a. CEI Electrical Installation Specification SP-33-4549-00 requires a one-inch minimum separation between conduits containing Class 1E circuits and conduits containing Non-Class 1E circuits.

Contrary to the above:

- 1) Installed Class 1E conduit 1R331024A and Non-Class 1E conduit 1021R36X, did not meet the one-inch separation requirement.

- 2) Class 1E conduit 1R33R516A was separated by 1/2 of an inch from Non-Class 1E conduit 1R52W91X located elevation 568' in the Auxiliary Building above the RCIC instrument panel 1H22-P017.
- b. CEI Electrical Installation Specification SP-33-4549-00 requires a minimum horizontal and vertical separation of six inches between conduits of different divisions in cable spreading rooms.

Contrary to the above:

- 1) Division 3 conduit 1R33A129C was installed separated by 2-1/2 inches from Division 2 conduits 2R33R919B and 1C11B3B at elevation 639' in the cable spreading room.
 - 2) Division 2 conduits 1R33R788B, 1R33R786B and 1R33R926B were installed separated by 1-1/2 to 3-1/2 inches from Division 3 conduits 1R33C2809C and 1R33C2071C at elevation 638' in the cable spreading room.
 - 3) Division 2 conduits 1R33R920B and 1R33C3033B were separated by 3-1/2 inches from Division 3 conduits 1R33R2071C, 1R33C2809C, 1R33C2914C, and 1R33A129C located at elevation 638' in the cable spreading room.
 - 4) Division 2 conduit 1R33T329B was separated by 1-1/2 inches from Division 3 conduit 1R33T330C located at elevation 638' in the cable spreading room.
 - 5) Division 2 conduit 1R33T329B was separated by 2-1/4 inches from Division 3 conduit 1R33C291C located at elevation 638' in the cable spreading room.
- c. CEI Electrical Installation Specification SP-33-4549-00 requires that the minimum separation may be reduced to one inch for conduits of redundant divisions when routed through wall and floor penetrations.

Contrary to the above, Division 1 conduit 1R33C1098A was separated by 3/4 of an inch from Division 3 conduit 1R33R334C through a floor penetration at elevation 606' in Room 1 of the Auxiliary Building.

B. Results of November 1-4, 1982, inspection.

The inspector was unable to determine whether the licensee completed an inspection of all installed conduits to determine whether all the separations violations have been identified and evaluated. The licensee was requested to provide this information in a supplemental response.

C. Revised Response.

Subitem a. and Subitem c.

1. Corrective action taken and results achieved:

Separation criteria violations identified in the IE Report where Class 1E and Non-Class 1E conduit did not meet the one (1) inch separation requirement, were documented on LKC Nonconformance Reports 1193 and 1323. The separation criteria violation identified in the IE Report where Division 1 conduit and Division 3 conduit did not meet the one (1) inch separation requirement through a floor penetration was documented on LKC Nonconformance Report 1329. These Nonconformance Reports have been closed out and verified.

Construction Quality Engineer (CQE) Audit 717 was performed to evaluate LKC compliance with separation criteria. As a result, retraining was conducted for LKC QA inspectors and craft to assure understanding of separation requirements including the identification of violations. Two Action Requests were initiated as a result of CQE Audit 717 and they had not yet been closed and verified at the time of the inspector's review in November 1982. Action Request 001 concerned the apparent inability of one LKC Quality Control inspector to demonstrate sufficient knowledge and understanding of separation violations. To resolve this Action Request, 100% reinspection of all conduit runs previously accepted by this inspector was completed by LKC. CQE verification and sign-off of this Action Request was performed December 15, 1982. Action Request 002, signed off February 10, 1983, concerned communication with the Project Organization and required a procedure revision.

2. Corrective action taken to avoid further noncompliance:

Inspectors will continue to use the electrical installation specification SP-33-4549-00 for separation criteria along with required D-215 drawings and to document nonconforming conditions as required.

3. Date when full compliance will be achieved:

Although retraining had been completed by October 27, 1982, based on the inspector's concerns of the November 1982 inspection, we now consider that full compliance was achieved by February 10, 1983, the date of verification of the last open finding from CQE Audit 717.

Subitem b.

1. Corrective action taken and results achieved:

These items were evaluated by the Project Organization and determined to be in accordance with the Specification. Section 5:08.10.1 of SP33 requires 6" minimum separation between divisions, but is prefaced by "unless otherwise indicated on engineer-approved drawings..." The installation observed is in accordance with the applicable conduit layout drawings.

2. Corrective action taken to avoid further noncompliance:

For general plant areas, SP33 includes a paragraph allowing for a reduction to 1" separation if shown on the layout drawing. To clarify this requirement, ECN 8426-33-1899 was issued. In addition, LKC Procedure 4.3.1 was revised to reflect this specific criteria.

3. Date when full compliance will be achieved:

This item was considered to be resolved with all action complete as of October 27, 1982. Therefore, full compliance was achieved by October 27, 1982.

D. Subsequent Review.

None conducted yet.