

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No. 50-440/82-15(DEPT); 50-441/82-14(DETP)

Docket No. 50-440; 50-441

License No. CPPR-148; CPPR-149

Licensee: Cleveland Electric Illuminating Company
Post Office Box 5000
Cleveland, OH 44101

Facility Name: Perry Nuclear Power Plants, Units 1 and 2

Inspection At: Perry Site, Perry, OH

Inspection Conducted: November 1-4, 1982

Inspector: K. R. Naidu

Naidu

1/13/83

Approved By: C. C. Williams, Chief
Plant Systems Section

Williams

1/13/83

Inspection Summary

Inspection on November 1-4, 1982 (Report No. 50-440/82-15(DETP);
50-441/82-14(DETP))

Areas Inspected: Licensee's reply dated October 27, 1982 outlining the actions taken to correct items of noncompliance identified in IE Reports 440/81-19; 441/81-19. This inspection involved 22 inspection-hours by one NRC inspector onsite.

Results: No items of noncompliance were identified.

DETAILS

1. Persons Contacted

Cleveland Electric Illuminating Company (CEI)

R. L. Farrell, Manager, Quality Assurance Department
F. Stead, Manager, Nuclear Engineering Department
E. Riley, General Supervisor, Construction Quality Section
D. A. Graneto, Contract Administrator
R. Jadgechew, General Supervising Engineer
K. Kaplan, Senior Engineering Aide
*T. Stearn, Electrical Engineer

Gilbert Associates Incorporated (GAI)

J. Furness, Construction Quality Engineer

Kaiser Engineers

J. Kerr, Supervisor, Construction Quality Section

L. K. Comstock Company

*T. J. Woodman, Project Manager
*C. W. Hart, Assistant Quality Control Manager
*R. L. Bower, QC Manager
*E. Yockey, Corporate QA Engineer

*Denotes those persons who were not present at the exit meeting.

Licensee Action on Previous Inspection Findings

(CLOSED) Noncompliance (440/81-19-01a; 441/81-19-01a): Cable was pulled without the benefit of installed pullboxes even though the total number of bends in the conduit exceeded 270°. NCR LKC 810 dated December 8, 1981 identified that during the process of pulling cables 1R24F3C on November 16, 1981, the designated pullpoints were not used. Furthermore, the cable tension was not recalculated taking into account all the bends in the conduit. The cable tension was subsequently recalculated and was below the maximum pull tension permitted. L. K. Comstock Procedure 4.3.3 was revised and paragraph 3.2.6.2.(B) now states, "If the maximum pull tension is reached, when pulling through the designated pull points, L. K. Comstock will stop the pull and utilize the designed pull points as necessary to ensure that the maximum pull tension is not exceeded."

(CLOSED) Noncompliance (440/81-19-01b; 441/81-19-01b): There were two findings in this item. One was that cable pulling procedure 4.3.3 did not prescribe alternate methods to store partially pulled cables to preclude violating the established minimum bending radii. The licensee took corrective action by revising L. K. Comstock Procedure 4.3.3, paragraph 3.2.25 prescribing acceptable ways of storing partially pulled cables.

The second item involved 1M32R8B, 1M32R9B and 1M32R11B installed in the Emergency Service Water Pump House which were found to be stored in such a manner that the diameters of the inner-turns were less than the minimum bending radii prescribed by the manufacturer. The licensee corrective action is considered adequate.

(OPEN) Noncompliance (440/81-19-01c; 441/81-19-01c): It was identified that procedural requirements were not followed when DDR's were voided. L. K. Comstock Procedure 4.11.1 was revised to explicitly state the requirements to void a NR. Action Request (AR) 455 was initiated on March 12, 1982 to indicate that L. K. Comstock Nonconformance Reports were being voided incorrectly. The AR recommended that the QA Manager conduct a documented review of all voided NRs, conduct a training session on Procedure 4.11.1 and attach a copy of all the training records. The training had already been conducted on December 1, 1981 and credit was taken for this training. The previously voided NR's were reviewed and documented on a Surveillance Inspection Report (SIR), SE-945 dated April 19, 1982.

The inspector selected five of the voided NRs listed in the SIR which were reviewed, verified and signed by the L. K. Comstock QC Manager. Review of the five NRs indicates the following:

- a. NR LKC 866 dated December 10, 1981 indicates that no attachment criteria were given on EC-CPI 65-7 for K-15 hanger. A valid reason was given to void the NR. During the review, it was found that the NR was not signed; the designee of the QC Manager signed the NR on January 21, 1982.
- b. NR LKC 406 dated October 10, 1980 identified that the packaging list for cable reels omitted 5 EKI reels. This NR was voided by an invalid signature and the information was transferred to NR 409. During the review, this discrepancy was identified and an authorized individual signed the NR to void it.
- c. LKC NR 436 dated November 6, 1980 identified separation criteria violations for a conduit. Corrective action recommended was to relocate the non-safety related conduit. The NR was voided after the information was transferred to AFR 642. An unauthorized person signed the NR on December 17, 1980. This was corrected on April 19, 1982 with an authorized signature. Corrective action on AFR 642 was completed on January 6, 1981.
- d. NR LKC 231 dated April 10, 1980 identified hangers with dimensions which exceeded the tolerances specified on the relevant drawings. This NR was voided on April 15, 1980 by an unauthorized person. Subsequent to the review performed by LKC, an authorized person signed the voided NR to make it official. A valid reason was not given for voiding the NR. LKC Procedure 4.11.1 requires a valid reason for voiding the NR and (2) an authorized signature.

- e. LKC NR 531 was initiated on February 25, 1981 identifies that, upon uncrating low voltage penetration 1R72S005, the shield tube was observed to be damaged. Unauthorized individuals had voided the NR. The LKC QC Manager voided the NR on April 19, 1982. The NRC inspector determined that a valid reason was not given on for voiding it.

The inspector informed the licensee that surveillance activity documented in SE-945 was inadequate in that the procedural requirements of LKC Procedure 4.11.1 were not verified in its entirety but was limited only to verify a valid signature. Therefore, the licensee's statement that "The LKC Quality Control Manager has signed, reviewed and verified the previous improperly voided nonconformance reports" is inaccurate. The licensee agreed to re-review and re-verify of the previously "Voided NRs".

(CLOSED) Noncompliance (440/81-19-01e; 441/81-19-01e): Cable tray installation procedure 4.3.1 did not have the cable tray splice bolt torquing requirements. LKC Procedure 4.3.1 has been revised. Paragraph 3.2.3.6 now states that splice plate nuts shall be torqued to 35 ± 15 foot pounds with a manual torque wrench.

(OPEN) Noncompliance (440/81-19-03a; 441/81-19-03a): Several examples of failure to establish an inspection program were identified:

- a. The containment vessel nozzles and embedded pipe were not inspected to determine whether the diameter met the specification requirements. LKC Procedure 4.3.10 has been revised to clarify the inspection of electrical penetrations. However, the implementation of the procedure could not be verified during this inspection since the licensee stated that the inspection records would be complete by December 15, 1982. This item will be reviewed during a subsequent inspection.
- b. The inspector reviewed the revised LKC Procedure 4.3.4 and the associated checklists and discussed the adequacy with cognizant contractor and licensee personnel. The inspector also reviewed the proposed document package which the licensee states will be complete by January 14, 1983. The inspector stated and the licensee representatives agreed that the revised procedure and the checklists were inadequate. The licensee agreed to revise the procedure and include additional information in the records. Even though the above indicates that the procedure and associated checklists were inadequately reviewed and approved, indicating inadequate corrective action, this matter is not being identified as an item of noncompliance, because, the associated documentation will be ready for re-inspection only on January 14, 1983.

(OPEN) Noncompliance (440/81-19-03b; 441/81-19-03b): Four cable trays - B-1313, B-1303, B-1324 and A-3201 were identified to have burrs and

sharp edges which were identified during cable tray inspections. The licensee's response stated that "LKC Nonconformance Report 1070 was generated to document the specific cable trays in question. After re-inspection these cable trays were evaluated to be acceptable." The inspector reviewed LKC NR1070 dated July 1, 1982 and determined that only cable tray B-1324 was identified therein. The NR recommended removal of the sharp edges and burrs. Corrective action was verified on September 27, 1982.

Surveillance Report SE 942 dated April 14, 1982 states that cable trays B-1313 and B-1304 were inspected and that the burrs were acceptable. The NRC inspector determined that acceptance/rejection criteria for the burrs and sharp edges were not developed and arbitrary opinions were used in making judgements. The licensee agreed to review this matter further.

For Cable Tray A-3201, Audit Finding Report 1228 dated March 23, 1982 was initiated. On March 23, 1982, it was verified that the sharp edge and abrasion were removed. The licensee was unable to provide the status on cable tray B-1303.

This inspector informed the licensee that the statement in his response relative to LKC NR 1070 was inaccurate, and that there was no readily retrievable records to indicate that corrective action was taken on cable tray B-1303. The licensee stated that he will provide a supplement to their response.

(OPEN) Noncompliance (440/81-19-03c; 441/81-19-03c): The bolts on splice plates were identified to have been inadequately seated.

- a. It was previously identified that three splice plate bolts on cable tray A-1699 located at column line D-11 at elevation 599' in the auxiliary building were identified to be improperly seated. Splice plate reverification checklist (SRCL) dated June 2, 1982 indicated various attributes of the splice plate connections of this tray section were verified. Several boltheads would not seat. Recommended resolution as indicated in NR CQC 2344 was to torque the bolt to 50 foot pounds when the bolts were not seated.
- b. It was previously identified that two of the eight splice plate bolts on cable tray 1E21H1A located at column line F-8 at elevation 579 in Room 2 of the auxiliary building were identified to be improperly seated. SRLC dated June 7, 1982 indicates that various attributes were verified and now all bolts are seated properly.

The licensee in his response states that an inspection program was developed to reverify on a sample basis the adequacy of installation of bolts. The licensee was unable to demonstrate that ANY recognized standard approaches were used to select the sample size and was unable to identify the technique used in selecting a random sample. Furthermore, the response does not address the lack of inspection records which should have verified that the splice plate bolts were torqued.

(CLOSED) Unresolved (440/81-19-05; 441/81-19-05): The CEI QA Manager had stated that the checklists on penetrations 1R72-5011, 1R71-5017, 1R73-5027 and 1R72-5028 will be reverified because the signatures on the original checklists were questionable. Surveillance Inspection Report 967 documents that on June 15, 1982 a first-line surveillance was performed on the documentation and hardware for penetrations outboard of 1R725011, 5017, 5027 and 5028. Additionally a visual inspection was then performed to determine whether any modifications was done to the outboard plate. The surveillance determined that no modifications were performed.

(CLOSED) Noncompliance (440/81-19-08; 441/81-19-08): It was identified that even though several instances of inadequate supervision were identified in Nonconformance Reports, neither the licensee nor his contractor performed trend analyses and took corrective action to preclude repetition.

LKC initiated Corrective Action Report (CAR) 008 dated June 10, 1982. The CAR requested the LKC Project Manager to take steps to increase the awareness of the quality requirements at the craftsmen, foreman and general foreman level. Representatives from the Trade Union came to the site and held training sessions. Inspections were conducted from June 1982 onwards and the results indicate a positive response at the craftsmen level to the quality requirements. The LKC management continues to trend the performance.

CEI performed Audit 723 to verify proper implementation of LKC Procedure 4.3.1 for raceway installation, the scope was to evaluate the efficiency of LKC QC and crafts personnel involved with the installation and inspection of raceway activities. Both LKC craft and QC inspection personnel were found to be following procedural requirements.

(CLOSED) Noncompliance (440/81-19-10; 441/81-19-10): It was identified that storage of instruments panels was inadequate and that paper and debris were observed in the Unit 1 Annulus Space.

Audit 614 dated October 22, 1981 identifies instrument racks which were not properly stored were identified. Two Action Requests were written to the contractor to adhere to the storage requirements. This item was closed on January 28, 1982 by the licensee.

Action Request 369 was initiated on December 16, 1981 to clean the annulus area of Unit 1 Reactor Building and at elevation 638' of the Intermediate Building. The corrective action reply to this AR states that the reactor building composite crew cleaned the annulus area, and the Nuclear Island composite crew cleaned the Intermediate Building area on January 7, 1982.

(OPEN) Noncompliance (440/81-19-11; 441/81-19-11): It was previously identified that examples of nonconforming conditions relative to separation of conduits were not identified. LKC NRS 1193 and 1323 dated April 19 and June 18, 1982 respectively identify the conduits which do not meet the one inch separation criteria. Proposed dispositions were

to rework the conduits. Corrective actions were completed on November 11 and 19, 1982 respectively and await QC inspection.

Audit Report 717 documents an audit performed on LKC to verify proper implementation of separation requirements. As stated in LKC Procedure 4.3.1. Two deficient areas were identified (1) in some cases LKC QC failed to identify separation violations to site engineering (2) one LKC QC inspector failed to demonstrate adequate knowledge of separation criteria. Audit finding reports were written on both deficient areas. Corrective action included retraining and requalification of LKC QC inspectors. Three violations were documented in NRs. The action requests 1 and 2 were verified by the licensee's QC to be acceptable on September 13 and October 11, 1982.

Review of NR 1329 dated June 25, 1982 indicates that the corrective action taken was verified on August 19, 1982. 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.

(CLOSED) Noncompliance (440/81-19-11; 441/81-19-11): 4.16 KV switchgear was energized and no Hold tags were affixed even though the quality of the holddown welds were indeterminate. Quality Tagging Procedure PAP 1404 dated July 26, 1982 was developed to be implemented by all onsite contractors.

(CLOSED) Noncompliance (440/81-19-16; 441/81-19-16): Inadequacies in the design process and the as-built condition must be evaluated. Action Request (AR) 457 initiated on April 12, 1982 requested review of vendor drawings E231 and E233 for AWS D1.1 Code requirements. Corrective action taken was to revise the drawings to indicate fillet welds instead of "plugwelds". L. K. Comstock (LKC), the electrical contractor initiated Nonconformance Reports NR-978, 999 and 1000. Gilbert/Commonwealth Associates, the AE for Perry Nuclear Power Plant in a memo dated May 17, 1982 to the Electrical and Structural Departments, Perry Project Personnel reminded them that vendor drawing review was an important responsibility for all disciplines and requested them to follow the requirements of an internal Procedure DCP 3.05 in assuring that any discipline having interface input receives the drawing for review in accordance with paragraph 3.2.3.2 and return their comments per paragraph 3.2.4.1.

Action Request (AR) 457 dated April 12, 1982 was initiated requesting Gilbert Associates Incorporated (GAI) to review drawings E 231 and E 233 for the AWS D1.1 code requirements. It was stated that although the welds shown on the drawing did not meet the diameter versus the thickness limitations of the AWS D1.1 (1975), the adequacy of the original welds was established by the seismic qualification test of the switchgear. According to the NRs 978, 999 and 1000, additional fillet welds were utilized after approval from the vendor.

(OPEN) Noncompliance (440/81-19-19; 441/81-19-19): L. K. Comstock failed to control purchased safety-related material. Also, adequate measures were not established in the LKC stock room to control purchased hardware. Safety-related material purchased for specification SP-33 were segregated from non-safety related material purchased under Specification SP-34.

The inspector discussed the contents of the licensee reply with cognizant personnel and determined that CAR 82-19 was written to address both the control of purchased items such as bolts and nuts in the warehouse and the gusset plates for the electrical hanger (which is identified as an unresolved item (440/81-19-21; 441/81-19-21)). With the currently implemented system, LKC cannot account for and retrieve hardware subsequently known to be deficient. The response does not describe how the steel plates purchased for hanger gusset plate fabrication was controlled to assure that only gusset plates with known heat numbers and certification were installed. The inspector informed the licensee that the response provided was unacceptable.

(CLOSED) Unresolved (440/81-19-21; 441/81-19-21): The traceability on gusset plates was not maintained when the heat numbers were not transferred when gusset plates were cut into smaller pieces. This matter is being resolved in the noncompliance 440/81-19-19; 441/81-19-19.

(CLOSED) Noncompliance (440/81/19-23; 441/81-19-23): The L. K. Comstock Company failed to control issuance of drawings to the field. An audit was performed and documented in AR 635. Several minor discrepancies were identified. This audit recommended two actions, one to search for voided or out-of-date drawings and procedures that were considered lost; the other to conduct training to field personnel. The corrective action was verified on February 19, 1982.

Exit Interview

The Inspector and the Resident Inspector met with licensee management representatives denoted in paragraph 1 on November 4, 1982, and summarized the purpose and findings of the inspection. The licensee acknowledged the findings.