

AppendixNOTICE OF VIOLATION

Cleveland Electric Illuminating
Company

Docket No. 50-440
Docket No. 50-441

As a result of the investigation conducted during the period October 27, 1981 - March 19, 1982, and in accordance with the NRC Enforcement Policy, 47 FR 9987 (March 9, 1982), the following violations were identified:

1. 10 CFR 50, Appendix B, Criterion III, states in part, "The design control measures shall provide for verifying or checking the adequacy of design, such as by the performance of design reviews ... performed by individuals or groups other than those who performed the original design ..."

CEI Corporate Quality Assurance Program Section 0300 states in part, "CEI performs a design coordination function consisting of selected reviews and design control monitoring program ... These procedures shall assure that ... Design activities are conducted in a planned and systematic manner ... Perry Safety Analysis Report requirements have been appropriately addressed in design documents ... Design requirements can be controlled and inspected and/or tested to specified acceptance criteria."

CEI Specification, Electrical Installations, requires compliance with the AWS D1.1 Codes.

Contrary to the above, Gilbert Associates (the Architect Engineer) failed to adequately review Gould Inc. Drawings E-35-51-958 E231 and E233, in that the review failed to determine that the "plug weld" specified to weld 7/16" diameter holes in the switchgear did not meet the AWS D1.1 Code requirements. This resulted in welds being made which did not meet the specified code requirements.

This is a Severity Level IV violation (Supplement II).

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2. 10 CFR 50, 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. Gilbert Associates Incorporated Drawing D-215-001, Revision J, Criterion 13, states in part, "The total of all bends between pulling points in any run of conduit shall not exceed 270°; sufficient pull boxes are shown on drawings to meet this criteria." Further CEI letter PY-50/33-5357, to L. K. Comstock, dated January 20, 1981, instructs Comstock to use the pull boxes as pulling points.

Contrary to the above, the instructions were not incorporated into the procedure and on November 16, 1981, the inspectors observed cable being pulled through a conduit with bends totaling more than 270° (by at least 160°) without using the installed pull boxes as pulling points.

- b. Paragraph 3.2.24 of L. K. Comstock Procedure No. 4.3.3 states in part, "Care shall be exercised in supporting coils to prevent kinking or exceeding the minimum bend training radius ..."

Contrary to the above, LKC Cable Pulling Procedure 4.3.3 was not appropriate to the circumstances in that it did not prescribe alternate methods to store partially pulled cables to preclude violating the established minimum bending radii. As a result the inspectors observed cables identified as 1M32R8B, 1M32R9B, and 1M32R11B coiled, and suspended by a single tie wrap in such a manner that the bend radii of the inner turns of subject cables were less than the minimum bend radii established by the manufacturer.

- 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.

- d. The L. K. Comstock Company Quality Assurance Manual requires separate positions for a QA Manager and a QC Supervisor.

Contrary to the above, from April 1981 until February 1, 1982, one individual holding the position of QA/QC Supervisor was filling the positions of QA Manager and QC Supervisor. The lack of adequate staffing contributed to L. K. Comstock's poor performance.

- e. The manufacturer of cable tray hardware materials, in their letter dated December 20, 1978, specified a maximum allowable torque of 45 ft. lbs. to tighten 3/8"-16 3/4" rib neck carriage bolts supplied for the cable tray splice joints.

Contrary to the above, L. K. Comstock's applicable cable and conduit installation procedures were not appropriate to the circumstances in that this torque requirement was not incorporated. Additionally, further inspections revealed there were no records to indicate that this requirement was met for any cable tray installed prior to this inspection (examples of improperly torqued bolts are discussed in paragraph 5.C below).

This is a Severity Level IV violation (Supplement II).

3. 10 CFR 50, Appendix B, Criterion VI, states in part, "Measures shall be established to control the issuance of documents, such as ... drawings, including changes thereto, which prescribe all activities affecting quality ..."

L. K. Comstock Procedure No. 4.2.1, Drawing and Specification Document Control, states, in part, in Paragraph 3.5.4, "Returning void drawings, the recipient shall sign the Field Drawing Transmittal (Form 52A - Void Issue Returned Line) and return it with the void drawings to the Document Control Coordinator," and in Paragraph 3.6, "Void drawings will be returned by recipients from the field by the General Foreman within two (2) working days of the issuance date noted on the Field Drawing Transmittal Form."

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Contrary to the above, L. K. Comstock Company failed to return the voided copies of six drawings (Gilbert Associates, Inc. Nos. 4549-58-027; 4549-58-028; 4549-58-030; 4549-58-031; 4549-58-032; and 4549-58-033). Revision 1 of each of these drawings was found at a L. K. Comstock foreman's work area on the 620' elevation of the Control Complex instead of the most recent Revision (revision 4). Revision 1 was issued in 1977 and Revision 4 was issued in 1981.

This is a Severity Level V violation (Supplement II).

4. 10 CFR 50 Appendix B, Criterion VIII states in part, "Measures shall be established for the identification and control of materials, parts ... assemblies. These measures shall assure that identification of the item is maintained by heat number, part number, serial number or other appropriate means, either on the item or on records traceable to the item, as required throughout fabrication, erection, installation, and use of the item."

The CEI Corporate Nuclear Quality Assurance Program Section 0800, in paragraph 1.2, states, in part, "Measures shall be established to implement the following requirements ... Identifying and controlling material, parts and components including partially fabricated sub-assemblies or subdivided materials to preclude the use of incorrect or defective items."

Contrary to the above, the electrical contractor, L. K. Comstock Corporation, failed to establish adequate measures to control purchased hardware such as bolts, nuts, and cable mounting bases and store them in the stockroom in such a manner that defective items could not be traced to the appropriate documentation or shipment to preclude the use of incorrect or defective items.

This is a Severity Level IV violation (Supplement II).

5. 10 CFR 50, 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."

- 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. 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.

- c. L. K. Comstock'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:

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- (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.

This is a Severity Level IV violation (Supplement II).

6. 10 CFR 50, Appendix B, Criterion XIII, states in part, "Measures shall be established to control the handling, storage, shipping, cleaning and preservation of material and equipment in accordance with work and inspection instructions to prevent damage or deterioration."
 - a. CEI Construction Quality Assurance Procedure No. 2-1301 in Paragraph 1.2.3, states in part, "Monitor housekeeping on a continual basis while performing storage and maintenance inspections. Forward any deviation noted on an Action Request, to Project Safety Supervisor."

Contrary to the above, the inspectors observed that the protective covers on the Reactor Core Isolation Cooling and Residual Heat Removal instrument panels had deteriorated and the storage and maintenance inspection had not identified this condition prior to the NRC inspection.
 - b. CEI Specification N. SP-33-4549, Procurement Specification for Electrical Installations, paragraph No. 2:16.1, states in part, "The contractor shall keep the premises clean at all times during the progress of the work and shall remove dirt and rubbish as directed by the Site Organization ..."

Contrary to the above, on December 4, 1981, the inspectors observed potential fire hazards, consisting of large amounts of paper and other combustible materials, on the scaffolding in the Unit 1 annulus at elevation 649'. CEI was notified of this potential fire hazard on December 4, 1981. Licensee personnel advised Region III the hazard would be removed by

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December 7, 1981. On December 10, 1981, Region III personnel reinspected this same area and found a fire had occurred. Interviews revealed that the licensee did not know when the fire started or when it was extinguished. There was no damage to safety related equipment as a result of the fire.

This is a Severity Level IV violation (Supplement II).

7. 10 CFR 50, Appendix B, Criterion XV, states in part, "Measures shall be established to control ... parts, or components which do not conform to requirements in order to prevent their inadvertent use or installation: These measures shall include, as appropriate, procedures for identification, documentation, ... and notification to affected organizations. Nonconforming items shall be reviewed and accepted, rejected, ... in accordance with documented procedures."

CEI Corporate Nuclear Quality Assurance Program, Section 1500, Revision 2, Paragraph 1.1 states in part, "Nonconformance Reports shall be used to identify materials, parts, components, structures or systems which are not in compliance to the requirements of specifications, codes, drawings, and detailed installation or manufacturing program requirements."

L. K. Comstock Procedure No. 4.11.1, Nonconformance Items and Corrective Action, paragraph 5.5.1 states in part, "... Nonconforming Items are either segregated, marked, or identified with a Hold Tag (Attachment No. 7), to indicate their status and prevent inadvertent use or installation."

Contrary to the above, 4.16 KV switchgear with hold down welds known to be nonconforming by the licensee were not identified and controlled with Hold Tags.

This is a Severity Level V violation (Supplement II).

8. 10 CFR 50, 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 ..."

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- 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 at 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 1/2 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.

This is a Severity Level IV violation (Supplement II).

9. 10 CFR 50, Appendix B, Criterion XVI, states in part, "Measures shall be established to assure that conditions adverse to quality, such as ... nonconformances are promptly identified and corrected."

CEI Corporate Nuclear Quality Assurance Program, Section 1600, Paragraph 1.2.b states in part, "Requests for corrective action shall include address of the action required to correct the adverse condition and to preclude continuation or recurrence.....The NQAD shall verify compliance to corrective action measures through audit, surveillance and inspection of project organizations and other QA evaluation and control techniques such as nonconformance trend analyses."

Contrary to the above, eight L. K. Comstock Nonconformance Reports written during the period August 14-November 20, 1981, indicated the reason for the nonconformances was inadequate attention to installation details by L. K. Comstock personnel. These Nonconformance Reports were not reviewed to trend the reason(s) for the inattention to installation details. Prompt corrective action was not taken.

This is a Severity Level V violation (Supplement II).

Pursuant to the provisions of 10 CFR 2.201, you are required to submit to this office within thirty days of the date of this Notice a written statement or explanation in reply, including for each item of noncompliance: (1) corrective action taken and the results achieved; (2) corrective action to be taken to avoid further noncompliance; and (3) the date when full compliance will be achieved. Consideration may be given to extending your response time for good cause shown.

9/24/82
Dated

James G. Keppler
James G. Keppler
Regional Administrator