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ILLINOIS POWER COMPANY

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U-10255
CLINTON POWER STATION, P.O. BOX 678, CLINTON, ILLINOIS 61727

March 19, 1985

Docket No. 50-461

Mr. James G. Keppler
Regional Administrator
Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: Potential 10CFR50.55(e) Deficiency 55-84-22:
Screenhouse Gallery Platforms

Dear Mr. Keppler:

On October 17, 1984, Illinois Power Company notified Mr. F. Jablonski, NRC Region III (Ref: IP Memorandum Y-25867, dated October 17, 1984) of a potentially reportable deficiency concerning the installation of three (3) gallery platforms located in the screenhouse. This initial notification was followed by one (1) interim report (ref: IP letter U-10224, D. P. Hall to J. G. Keppler dated November 27, 1984). Illinois Power's investigation of this issue is complete. Our investigation into this matter has determined that this issue does not represent a reportable deficiency under the provisions of 10CFR50.55(e). This letter is submitted as a final report in accordance with the requirements of 10CFR50.55(e). Attachment A provides the details of our investigation.

We trust that this final report provides sufficient information to perform a general assessment of this potentially reportable deficiency and adequately describes our overall approach to resolve this issue.

Sincerely yours,

D. P. Hall
Vice President

RLC/lr(LCF)

Attachment

cc: NRC Resident Office
Director, Office of I&E, US NRC, Washington, DC 20555
Illinois Department of Nuclear Safety
INPO Records Center

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ATTACHMENT A
Illinois Power Company
Clinton Power Station

Docket No. 50-461

Potential 10CFR50.55(e) Deficiency 55-84-22:
Screenhouse Gallery Platforms

Final Report

Statement of Potentially Reportable Deficiency

During the conduct of a non-safety related concrete expansion anchor test program, it was discovered that three (3) Category 1 gallery platforms, located in the screenhouse, had been installed as non-safety related. An investigation and evaluation of this issue has been performed to determine the extent of the problem, root cause, effect on installed hardware, and significance to the safety of operation of the Clinton Power Station (CPS).

Background

As a result of a non-safety related concrete expansion anchor test program, a violation of bolt spacing requirements was noted for the concrete expansion anchors which supported a gallery platform located in the screenhouse, elevation 707'6". During the performance of an evaluation of the load capacities for the bolt spacing violation, Baldwin Associates Civil/ Structural Engineering discovered that the gallery platform should have been installed in accordance with the requirements for Category 1 structures/components.

Investigation Results/Corrective Action

Preliminary investigation disclosed that a total of three (3) Category 1 platforms were installed as non-safety related. Nonconformance Report (NCR) No. 22002 was issued to document identified discrepancies.

Further investigation revealed that the gallery platforms have safety-related conduit located directly below, and supported by these platforms. The handrails, of the platforms, encompass safety-related piping, such that the piping could be subjected to additional loads should the platform supports fail.

During the dispositioning of NCR No. 22002, Sargent & Lundy (S&L) requested verification of installation torques of the high strength bolts utilized for the gallery platforms, and inspection of the structural welds for defects. NCR No. 24594 was

initiated to document identified deficiencies. NCR No. 24840 was initiated to document inadequate expansion anchor embedment, and NCR No. 24987 to document expansion anchor installation torque failure during the rework associated with NCR No. 24594.

Technical Requirements

Sargent & Lundy's drawing No. M11-1004, Revision B, dated August 24, 1977, Circulating Water Screenhouse Gallery Framing, calls for the fabrication of three gallery platforms, at elevation 711' - 0", in the Screenhouse, with the drawing released per Specification K-2939, Preliminary Site Work, a non-safety-related Construction Technical Specification.

Revision C of drawing No. M11-1004, dated November 20, 1979, revised the elevation to 707' - 6", and released it per safety-related Specifications K-2947, Furnishing Structural Steel, and K-2948, Erecting Structural Steel. In addition, Revision C of drawing M11-1004, was stamped Category 1, "For Gallery Framing Only".

Baldwin Associates (BA) Purchase Order (P.O.) No. C-14583 procured safety-related material from Bristol Steel & Iron Works on October 23, 1978. Rider #1 of P.O. No. C-14583, dated June 19, 1979, required all necessary safety-related documentation, i.e.: certificates of compliance, test reports, inspection reports, NDE records, etc., however Rider #1 was issued as "Non-Safety Related." All subsequent riders to P.O. C-14583 are issued as "Safety-Related".

The material for P.O. C-14583 was received at Clinton Power Station on September 10, 1980. Non-Safety Receiving Inspection Report (RIR) No. N-11417, documents the acceptance of the material.

Investigation Results/Corrective Action

Illinois Power (IP) prepared and implemented an investigation plan to determine the extent of this problem at CPS. The investigation plan included:

1. A review of documentation was performed to determine the cause for the gallery platform steel being receipt inspected and installed as non-safety related.

2. An evaluation was performed by Illinois Power Quality Assurance and Nuclear Station Engineering Departments to determine if the gallery steel is usable in a Category 1 structure.

3. A review was performed of Structural Travelers to ensure that this problem was limited to the three (3) identified screenhouse gallery platforms.

4. Sargent & Lundy performed a review for adequacy of the gallery platforms to carry design loads.

The following items discuss the results of our investigation:

1. A review of documentation, i.e., RIR No. N-11417, design drawings, and project specifications (K-Specs.), was conducted to determine the cause for the gallery platform steel being receipt inspected and installed under the non-safety program. Although the review of the documentation, as described in the Technical Requirements Section above could not be substantiated as the specific cause, it is considered a theory. Discussions with BA Receiving, QC Receiving, Engineering, and craft personnel (ironworkers) possibly involved in the receipt inspection or installation of the gallery platform steel appear to support this theory. Since much of the structural steel in the screenhouse is non-safety, the assumption was probably made that the gallery platforms were also non-safety.

2. An evaluation of existing documentation was performed by Illinois Power Quality Assurance (IPQA) and Nuclear Station Engineering Department (NSED) to determine if the gallery platform steel was usable in a Category 1 structure. IPQA obtained copies of the Certified Material Test Reports (CMTRs) and Certificates of Compliance (C of C) for RIR N-11417 and requested NSED to evaluate the documentation package. NSED conducted the evaluation of the documentation package and concluded that the material components supplied are in full compliance with applicable specification requirements for Category 1 structures.

3. Additional tests/rework was accomplished per the direction of S&L's disposition for NCRs 22002, 23162, 24594, 24840 and 24987, which were issued to document identified deficiencies associated with this investigation. Additionally, NCR 28369 was issued to document discrepancies noted during the QC final review of the associated rework travelers. All NCRs have been resolved in accordance with approved site procedures.

4. A sampling plan was developed by Baldwin Associates (BA) Civil Structural Engineering to review Structural Travelers and provide assurance that the problem is limited to the three platforms identified. The sampling plan was expanded to perform a complete review of the safety-related gallery platforms in the Auxiliary, Containment, Control, Diesel Generator,

Fuel, Radwaste, Screenhouse, and Turbine buildings. This review was accomplished using the Structural Travelers identified for all installed gallery platforms. During the course of the review, three Category 1 ladder platforms in Electrical Manhole No. 2, located between the screenhouse and powerblock, were found to have been installed as non-safety. NCR 26800 was issued to document this condition and was resolved in accordance with approved site procedures.

A review of existing documentation for the electrical manhole ladder platforms, i.e., receiving inspection report S-13987, design drawings, and project specifications (K-Specs) was conducted. All necessary documentation was found in receiving inspection report S-13987, i.e., Certified Material Test Reports (CMTRs), vendor inspection reports, receiving inspection reports, and vendor documentation review checklists. Since the same personnel responsible for inspection or installation of the screenhouse gallery platforms were also responsible for the electrical manhole ladder platforms, the assumption, again, was possibly made that the ladder platforms were also non-safety.

5. Sargent & Lundy performed an engineering review of the screenhouse gallery platforms to determine whether a significant safety deficiency would have existed if the conditions described had not been identified and corrected. The evaluation conclusion was that even if the conditions described had gone uncorrected, the gallery platforms would not have failed, and therefore would not have adversely affected the safety of operations of CPS.

   The deficiencies identified by inspection of the electrical manhole ladder platforms, as required by the disposition of NCR 26800, and documented by NCR 27423 were reviewed and evaluated by Sargent & Lundy with final disposition of use-as-is.

Safety Implications/Significance

Illinois Power's investigation of this potentially reportable deficiency is complete. S&L has reviewed and evaluated the deficiencies associated with this issue and has stated that the identified deficiencies, had they gone uncorrected, would not have adversely affected the safety of operations of CPS. On this basis, the issue is considered not to be reportable under the provisions of 10CFR50.55(e).