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ILLINOIS POWER COMPANY

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U-10142

CLINTON POWER STATION, P.O. BOX 678, CLINTON, ILLINOIS 61727

April 13, 1984

Docket No. 50-461

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

Subject: Potential 10CFR50.55(e) Deficiency 55-83-11
Laminations in 3/8" Steel Plates

Dear Mr. Keppler:

On December 6, 1983, Illinois Power notified Mr. F. Jablonski, NRC Region III (Ref: IP Memorandum Y-18894, dated December 6, 1983) of a potentially reportable deficiency per 10CFR50.55(e) concerning laminations found in 3/8" thick steel plates supplied to Clinton Power Station (CPS) for use in electrical hanger applications. This initial notification was followed by one (1) interim report (Ref: IP letter U-10118, D. P. Hall to J. G. Keppler dated January 10, 1984). Our investigation of this issue continues, and this letter represents an interim report in accordance with 10CFR50.55(e)(3).

Statement of Potentially Reportable Deficiency/Background

During lighting fixture installation in a non-seismic area of CPS, a craftsman discovered a 3/8" x 8" x 8" steel plate with a pronounced lamination. Examination of other uninstalled plates of the same heat number uncovered additional examples of visible laminations. Review of material requisitions indicates that some of the materials were issued for use in seismic areas of CPS. An evaluation of this issue is being performed to determine the extent of this problem, locations of potentially defective steel plates, and the significance of the issue on the operational safety of CPS.

Investigation Results/Corrective Action

Illinois Power has prepared and implemented an investigation plan to determine the extent and location of the suspect plate material. Investigations completed to date have identified the following information:

1. One thousand (1,000) 3/8" x 8" x 8" plates and five hundred (500) 3/8" x 12" x 12" plates of heat No.

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486K2790 have been received at CPS. Examination of heat number computer logs maintained at CPS showed that no other materials with this heat number have been received at CPS.

2. The 500 12" plates were received on August 17, 1981, as documented on Receiving Inspection Report S-14654. The 1,000 8" plates were received on October 12, 1981, as documented on Receiving Inspection Report S-15056.

3. The material was purchased by Baldwin Associates (CPS Constructor) from Interstate Steel Supply (Philadelphia, PA) by Purchase Orders C-32391 (12" plate) and C-33251 (8" plate). The material was purchased as safety-related to the requirements of ASTM A-36, for use in electrical hanger applications. Certified material test reports were received with the shipments, and showed Bethlehem Steel Corporation as the material manufacturer.

4. Upon identification of this issue, Nonconformance Reports (NCR) 12149, 15579, and 15580 were written. Unissued plates of the suspect heat number have been purged from CPS and placed on hold. An inspection of uninstalled plates found to date, consisting of 523 - 8" plates and 350 - 12" plates, was performed. A total of 12 - 8" and 6 - 12" uninstalled plates have been found with visible laminations at this time.

Illinois Power's investigation of this issue continues. The following actions have been/are being taken to further determine the locations of potentially defective plates at CPS:

1. A review of design drawings was performed to determine electrical hanger details that use the specific sized materials.

2. A review of approximately 1,700 electrical hanger installation travelers issued since the receipt of the suspect material and which specified the affected details was performed. This review identified approximately ninety (90) hangers that may have used material from the suspect heat number.

3. A visual inspection of hangers identified as using the suspect material was performed. No visible defects were found in the plates used.

4. A test plan is being developed to determine if non-visible laminations exist in any of the uninstalled plates, and to determine the effects of laminations (visible or not) on the strength of the plate. The test plan is scheduled for approval by April 30, 1984, with testing completed in June, 1984.

Since the initiation of the above investigation, an additional Nonconformance Report, NCR 15559, was written to document lamination found in one (1) 3/8" x 8" x 8" plate of a different heat number, HT 492N0492. Further investigation of this case is being performed under this potential 10CFR50.55(e) investigation to determine if the occurrence is isolated or generic to the shipment.

To prevent the installation of the suspect plate materials, uninstalled plates of Heat Number 486K2790 and 492N0492 have been purged from construction areas and isolated at CPS until further investigation of the issue has been performed. An evaluation of receipt inspection controls for this type of material is also being conducted to determine if improvements are necessary. However, evaluation of the installation inspection program showed that adequate controls presently exist to identify defective plate materials used in safety-related electrical hanger installations.

Safety Evaluation/Significance

Investigation of this issue is proceeding at this time to determine the extent and end uses of the potentially defective plate material. Until further inspection data has been obtained and evaluated, a definitive statement as to the affects of the material defects on the safe operation of Clinton Power Station cannot be made. It is expected that approximately ninety (90) days will be necessary to further evaluate this issue and to provide a final report on the matter.

We trust that this interim report provides sufficient background 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

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