DMB

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EF2-66495

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

Subject: Report of 10CFR50.55(e) Item on Linear Cracking in Unistrut (#110)

Dear Mr. Keppler:

On January 4, 1984, Detroit Edison's Mr. W. R. Wingfield, Quality Engineer - Construction Quality Assurance telephoned Mr. R. C. Knop of NRC Region III to report on linear cracking in Unistrut at the Fermi 2 site.

Linear (longitudinal) cracks in the side-to-back bends of Unistrut Catalog No. P1000 Strut were identified during an installation inspection by PQA personnel. Further investigation by PQA personnel originally narrowed the scope of the problem to P1000 Strut of Coil Lot Number 2Z6450. However, subsequent reinspection by PQA of all unistrut in stock identified less significant similar indications in other coil lot numbers. The use of this lot of material at Fermi 2 appears to be limited to electrical raceway supports.

Cracking appears to have originated during forming of the material due to a high hardness of the particular heat. The cracks found, in some instances, penetrate 50 percent of the wall thickness. Cracking has been subsequently identified in all bends of strut formed from the defective Coil Lot Number.

Longitudinal cracks could severely reduce the strength of the strut cross-section at points of high stress concentration during a seismic event. This could result in premature failure of the strut and could compromise the attached safety-related plant component (e.g., conduit, cable tray).

Detroit Edison Project Field Engineering has supplied samples from the 2Z6450 lot to Unistrut Building Systems for determination of actual strut structural properties under various load configurations. Unistrut Building Systems has provided an engineering test report detailing structural properties for the deficient material lot samples. Unistrut Building System's test report indicates structural property test values for the samples exceed catalog requirements with no evidence of crack area proliferation. Detroit Edison Project Field

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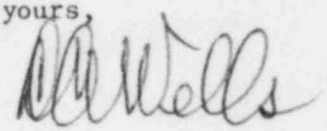
Engineering is currently evaluating the test results. Corrective action will be defined based on the results of the evaluation by Detroit Edison Project Field Engineering.

Another report on this item, either interim or final, will be sent when further information is available. If you have questions concerning this matter, please contact Mr. G. M. Trahey, Assistant Director - Project Quality Assurance.

Very truly yours,



cc: Mr. Richard DeYoung, Director
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Mr. Paul Byron, Senior Resident Inspector
U. S. Nuclear Regulatory Commission
6450 North Dixie Highway
Newport, Michigan 48166