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DMB

May 24, 1984
EF2-68,547

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

Dear Mr. Keppler:

Reference: Fermi 2
NRC Docket No. 50-341

Subject: Initial Report of 10CFR50.55(e) Item 124
"Lamination in ASTM-A516 Grade 70 Steel Plate"

On April 27, 1984, Detroit Edison's Mr. L. P. Bregni, Engineer-Licensing, telephoned Mr. J. W. McCormick-Barger of the NRC Region III, to report a potential deficiency concerning laminations found in 3 x 1/4 inch flat bar, ASTM-A516 Grade 70 steel.

Description of Deficiency

On March 8, 1984, NCR 84-0275 was written to document laminations found in two pieces of 3 x 1/4 inch flat bar steel. One piece was found installed on a brace for cable tray supports and the other during bending in the fabrication shop. The steel was identified in the NCR as ASTM-A516 Grade 70.

This steel was purchased by Detroit Edison between February 9 and April 1, 1984, for use in the fabrication of Seismic Category I cable tray supports. The heat number is identified on the steel from the supplier. Each cut piece is die stamped at the time of fabrication to identify it as Type A516 Grade 70.

An investigation was performed to quantify the amount of steel related to the defective pieces. This investigation revealed that the warehouse and the Bechtel fabrication shop were out of 3 x 1/4 inch A516 Grade 70 steel bar on February 9, 1984. The defective pieces were fabricated from steel purchased after February 9, 1984.

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There were three purchase orders received between then and April 1, 1984, involving 3700 feet of flat bar. After April 1st new material was segregated from that which involved the defective pieces.

There is between 1200 and 1600 feet of bar, in twenty foot sections from these purchase orders remaining in the fabrication shop; the rest has been released for construction.

Analysis of Safety Implications

This material is used in the construction of hangers for seismic category I electrical equipment. In this application, if an installed piece experiences a similar defect at these connection points, the bar could fail under seismic conditions, and result in the failure of a hanger. This may contribute to the loss of safety-related components or systems.

Corrective Action

The remaining steel of concern has been placed on hold.

Analysis and testing are being performed to determine the effect of the degradation caused by laminations, if any, and the resultant need for any corrective action.

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. Lewis P. Bregni, (313) 586-5083.

Sincerely,

Wayne H. Jens

cc: Mr. P. M. Byron
Mr. R. C. DeYoung
Mr. R. C. Knop