

ENCLOSURE

BELLEFONTE NUCLEAR PLANT UNIT 2
NCR 1007
10 CFR 50.55(e) FINAL REPORT
FAILURE OF CADWELD SISTER SPLICE
REBAR TO MEET ASTM A615 STRENGTH REQUIREMENTS

Description of Deficiency

Rebar steel in two cadweld sister splices did not meet ASTM A615 strength requirements in that the yield stress was 51,300 and 51,900 pounds per square inch rather than the 60,000 pounds per square inch minimum required by the specification.

Safety Implication Statement

Since improper rebar stock was used in the failed sister splices, the low yield exhibited by these two splices is not indicative of the quality of rebar being installed in permanent structures. The results of previous cadweld tests and the requirements to which rebar is purchased substantiates this statement. Also, studies show the low yield would not have impaired the structure's ability to carry design loads in that portion of the structure where the failed splices were located. Therefore, had the nonconformance gone uncorrected, the safe operation of the plant would not have been adversely affected.

Corrective Action

Investigation revealed that the rebar used in the failed sister splices came from the reinforcing bar yard cutoff pile (excess rebar removed during fabrication) and was not representative of the rebar used in the permanent structure. Also, the portion of the structure where the sister splices were located was investigated assuming rebar with the lower yield. The investigation demonstrated that the ability of this part of the structure to carry all design loads would not have been impaired. Instructions have been issued to construction requiring rebar material for sister splices to be processed at the same time as the production rebar for the area where the sister splice is to be used. No further corrective action is required.

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