

EVENT DESCRIPTION (continued)

beams to determine whether any further slackening had occurred. The hold-down beam tension was found to be 3850 psi: the minimum acceptable tension is 2800 psi.

The loosened keepers were rewelded to original specifications and were successfully retested. The original keepers on jet pump #5, however, could not be tack-welded without exhausting all accessible rim material, and the restrainer gate assembly and both clamp bolt keepers were replaced. The original restrainer gate assembly and clamp bolt keepers from jet pump #5 were sent to General Electric for analysis.

Each restrainer assembly was found in its proper position, with both clamp bolts fully tightened. The keeper failures had no effect on jet pump operation. Broken tack welds on jet pump restrainer clamp bolt keepers have been found on two previous occasions - in May, 1973, and July, 1975. These events each involved two keeper failures on Unit-3. (50-237/1976-19)

CAUSE DESCRIPTION (continued)

with a single tack weld, the keeper tends to be lifted off the gate surface as the result of weld shrinkage. With the keeper thus supported by the weld, any jet pump assembly vibrations induce the keeper to vibrate, ultimately fatiguing the weld.

As corrective action, General Electric recommended that two tack welds be placed 180° apart on each keeper. By securing the keeper in this manner, what was termed the "point support mode" would be eliminated, according to the report.

As previously reported, the station had already surmised that the keeper tack weld failures were caused by vibrational fatigue. The station's original objective was to reinstall the keepers with two tack welds 180° apart. However, difficulties were encountered in operating the welding equipment, in obtaining a suitable welding arc (ground), and in seating the keeper rims. Furthermore, there did not appear to be sufficient accessible keeper rim material to permit the placement of two diametrically opposed tack welds. Because of these considerations, the loosened keepers were rewelded to original specifications: i.e., one tack weld per keeper.

The station plans to inspect these welds during the next refueling outage. An evaluation will be made of the results of that inspection, and GE's recommendation or a suitable alternate will be implemented prior to startup if significant failures are noted.



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BBS Ltr. # 77-409

May 4, 1977

Mr. James G. Keppler, Regional Director
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U. S. Nuclear Regulatory Commission
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Glen Ellyn, Illinois 60137



Ref: Update report dated March 11, 1977 to R.O. 50-237/1976-13

Enclosed please find a revised update report to Reportable Occurrence report number 50-237/1976-19. This report is being submitted to your office in accordance with the Dresden Nuclear Power Station Technical Specifications, Section 6.6.B.

B. B. Stephenson
Station Superintendent
Dresden Nuclear Power Station

BBS:sm

Enclosure

cc: Director of Inspection & Enforcement
Director of Management Information & Program Control
File/NRC

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