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BBS Ltr. #461-75

Dresden Nuclear Power Station
R. R. #1
Morris, Illinois 60450
July 31, 1975

Mr. James G. Keppler, Regional Director
Directorate of Regulatory Operation-Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

SUBJECT: REPORT OF ABNORMAL OCCURRENCE PER SECTION 6.6.A OF THE TECHNICAL SPECIFICATIONS
FAILURE OF RESTRAINER CLAMP BOLT KEEPER ON JET PUMPS

References: 1) Regulatory Guide 1.16 Rev. 1 Appendix A

2) Notification of Region III of U. S. Nuclear Regulatory Commission
Telephone: Mr. P. Johnson, 0820 hours on July 22, 1975
Telegram: Mr. J. Keppler, 1120 hours on July 22, 1975

3) Drawing Number GE Drw #729E434

Report Number: 50-249/75-32

Report Date: July 31, 1975

Occurrence Date: July 21, 1975

Facility: Dresden Nuclear Power Station, Morris, Illinois

IDENTIFICATION OF OCCURRENCE

The clamp bolt keeper tack welds on jet pumps #6 and #17 failed.

CONDITIONS PRIOR TO OCCURRENCE

Unit-3 was shut down for refueling.

50-249

DESCRIPTION OF OCCURRENCE

At approximately 1430 hours on July 21, 1975, during restrainer keeper lift testing of the Unit-3 jet pumps it was noted that several tack welds had parted on the outboard clamp bolt keepers for #6 and #17 jet pumps. A visual examination by underwater television had revealed no visible defects on either jet pump keeper; however, during the lift test, which ascertains the resilience of keeper and weld, the welds broke.

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DESIGNATION OF APPARENT CAUSE OF OCCURRENCE (Improper Installation)

The apparent cause of both keeper failures is poor tack welding. Properly made, the welds would normally hold the keeper securely to the jet pump restrainer.

ANALYSIS OF OCCURRENCE

Failure of both inboard and outboard clamp bolt keepers could conceivably allow the clamp bolts to back out of the jet pump wedge and restrainer assembly. A double failure of this nature occurring during reactor operation would result in increased vibration of the jet pump and might ultimately lead to separation of the jet pump body at the slip fitting between the mixer and diffuser sections.

The tack weld failures were induced by the artificial vibration of the lift testing. The jet pumps were securely fastened by means of the inboard clamp bolts, both of which were tested satisfactorily. In any event, the routine daily surveillance of jet pump flow characteristics would detect any such discrepancy and the reactor would be shut down within 24 hours.

The loss of a jet pump during operation has been analyzed as an acceptable condition by the Quad Cities station; their evaluation is applicable to Dresden. Plant personnel and the public were not endangered by this occurrence.

CORRECTIVE ACTION

Clamp bolt keepers for jet pumps #6 and #17 were rewelded and successfully retested. These jet pumps will be inspected during the next major refueling outage to verify the integrity of the tack welds.

FAILURE DATA

There have been no previously reported failures of this nature at Dresden.

For B. B. Stephenson
Superintendent

BBS:smp

File/NRC