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May 9, 1980

Mr. James G. Keppler, Director  
Directorate of Inspection and  
Enforcement - Region III  
U.S. Nuclear Regulatory Commission  
799 Roosevelt Road  
Glen Ellyn, IL 60137

Subject: Dresden Station Units 2 and 3  
Quad Cities Station Units 1 and 2  
Response to IE Bulletin 80-07,  
BWR Jet Pump Assembly Failure  
NRC Docket Nos. 50-237/249 and 50-254/265

References (a): J. G. Keppler letter to C. Reed dated April 7,  
1980

(b): D. L. Peoples letter to J. G. Keppler dated  
April 23, 1980

Dear Mr. Keppler:

Reference (a) transmitted IE Bulletin 80-07, which requested action and written response concerning potential failures of BWR jet pump beams.

Reference (b) provided our earlier response to Item B.2 concerning additional surveillance testing to be performed at Dresden Units 2 and 3 and Quad Cities Units 1 and 2. An alternate, meaningful and more convenient surveillance using jet pump loop flows and recirculation pump speeds (as opposed to individual jet pump readings) will now be implemented for Quad Cities Units 1 and 2. The jet pump loop flow will be checked against a characteristic plot of jet pump loop flow versus pump speed for each recirculation loop. Either loop exhibiting a deviation of +5% away from established trends (including expected noise) will require a check of individual jet pump flow characteristics to be made. These jet pump characteristics will be compared to established characteristics, in an attempt to determine early an indication of jet pump degradation or failure. Individual jet pump data will continue to be collected until sufficient jet pump (base) data are accumulated and the above procedure can be fully implemented. As stated for Dresden 2 & 3 in Reference (b), the above tests will only be considered conclusive for recirculation pump speeds greater than 60%.

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Paragraph B.1 of Reference (a) required justification for continued operation for those plants which have not performed visual and ultrasonic inspections of the jet pump hold-down beams. Although visual underwater T.V. camera inspections are performed at each refueling outage, ultrasonic inspections have not been performed at Dresden Unit 2 and Quad Cities Unit 1. As indicated above, Dresden and Quad Cities Stations have established the procedures for a daily surveillance of jet pump parameters which assures proper jet pump performance. The procedures utilize established operating data bases with a daily surveillance program to provide an early indication (at least 7 days) of an impending jet pump failure. Based on the established procedures and surveillance program, and analyses of accident conditions we have determined the following:

- 1) Significant cracking of a jet pump beam will be detected at least 7 days prior to beam failure and jet pump disassembly.
- 2) A comparison of LOCA loads to normal operating loads on the jet pump beams has indicated that the probability of a coincident LOCA and a jet pump failure is less than the probability of the occurrence of the design basis accident.

Considering the above, plus the fact that the required inspections will be performed at the next refueling outage on each of the two units, jet pump beam cracks do not involve a significant increase in the probability or consequences of accidents previously considered and they do not involve a decrease in the safety margin during postulated accidents. Therefore, there is reasonable assurance that the health and safety of the public will not be endangered by continued operation.

Please address any questions you may have concerning this matter to this office.

Very truly yours,

*D. L. Peoples*  
D. L. Peoples  
Director of  
Nuclear Licensing

SUBSCRIBED and SWORN to  
before me this 9<sup>th</sup>, day  
of May, 1980

Nancy M. Nascimento  
Notary Public