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April 23, 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 Station Units
NRC Docket Nos. 50-237/249 and 50-254/265

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

Dear Mr. Keppler:

In response to IE Bulletin 80-07 transmitted by Reference (a), a modified jet pump surveillance program will be implemented on Dresden Units 2 and 3 and Quad Cities Units 1 and 2. This program is intended to satisfy the requirements of items B.1, B.2, and B.3 of the Bulletin and was in place within 10 days of Bulletin receipt or unit startup.

The jet pump surveillance program will be performed daily and following recirculation pump restart (when at rated temperature and pressure), and following unexpected changes in core flow, recirculation flow, or established power flow relationships. Bulletin surveillance items B.2.b.(1) and B.2.b.(2) are currently addressed in our Technical Specifications and have proven to be excellent surveillances to diagnose jet pump failure. We will continue to perform these checks in accordance with Technical Specifications.

Item B.2.b.(3), addressing individual jet pump flow characteristics, is intended to possibly provide an early indication of jet pump degradation or failure. An alternate, meaningful, and more convenient surveillance using jet pump loop flows and recirculation pump speeds (as opposed to individual jet pump readings) will be implemented for Dresden Units 2/3. The ratio of jet pump loop flow/recirculation pump speed will be checked daily on

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a plot of this ratio 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. If one or more jet pump's normalized flow characteristics exceeds established characteristics (including expected noise) by more than 10%, then a degraded jet pump will be diagnosed and the reactor shall be shutdown in accordance with Technical Specification requirements. However, because of greater instrument uncertainties at reduced flow rates, a final determination to shutdown may require increasing recirculation speed beyond 60% and/or checking the calibration of affected instruments. This method of testing to detect a failed or degraded jet pump was discussed with NRC Inspection and Enforcement personnel at the April 16 Dresden 3 meeting in Bethesda, Md., with their concurrence.

For Quad Cities Units 1 and 2, individual jet pump flow readings will be taken in order to establish a data base of expected pump characteristics. An evaluation of the use of the jet pump loop flow to recirculation pump speed ratio test is being performed. If favorable, this test, with its 5% deviation criteria may be performed instead, using the individual jet pump flow test for confirmation, as for Dresden 2/3, above.

The data base required to perform the above checks will normally be acquired for the expected power and flow operating regions early in each operating cycle. A complete response to IE Bulletin 80-07 will be provided within 30 days of bulletin receipt.

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 Licensing

SUBSCRIBED and SWORN to
before me this 23rd, day
of April, 1980

Nancy M Dawley
Notary Public

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