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Docket Nos. 50-348
50-364

April 12, 1982



Director of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attn: Mr. John F. Stoiz

Joseph M. Farley Nuclear Plant - Unit Nos. 1 & 2
Steam Generator Tube Experience as
referenced in NUREG-0886

Gentlemen:

We have reviewed your recently issued NUREG-0886 entitled "Steam Generator Tube Experience". During our review, several areas of concern were identified. The following is a discussion of our concerns.

1. Table 1, Operating experience with Westinghouse PWR steam generators through November 1981, pages 18 and 19.
 - a. Farley 1 is listed as having had eight leaking tubes and eight plugged tubes. Only six tube leaks have occurred. All leakage was below Technical Specification requirements. The leaking tubes were located by hydrostatic testing, and were subsequently plugged. Two other tubes which were examined by eddy current testing (ET) were found to have recordable indications. The indications could not be characterized from the evaluation of test data and, although no tube leakage had occurred, the tubes were plugged to prevent future problems.

Farley 1 is also noted in the report as having experienced primary side stress corrosion cracking (SCC) in small radius U-bends. In March 1979, all steam generator C row 1 tubes and various other tubes were examined by ET. The defect in one tube (which was previously identified as a leaker) was located at the hot leg side transition from the straight tube length into the U-bend on the first row. All tubes examined, exclusive of the leaker,

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showed no sign of tube wall degradation, thinning or denting. In December 1980, all steam generator B row 1 tubes (exclusive of the three tubes which were previously plugged) and row 2 tubes and various other tubes were examined by ET. No indications were found. Of the six leaking tubes (three in steam generator B and three in steam generator C), one tube U-bend defect was found by ET, one leaking tube was examined by ET with no recordable indications found, and four tubes were not examined by ET at the time of leak detection. Neither the ET results to date nor any other qualitative examination data indicate that Farley 1 has a generic problem with primary side stress corrosion cracking.

- b. Farley 2 is listed as having had five leaking tubes and five plugged tubes. Of the five plugged tubes, two tubes were plugged at the Westinghouse factory, and two tubes were plugged during construction. Therefore, these tubes never leaked. The leakage rate in the one remaining tube was below Technical Specification requirements. The tube was plugged during initial startup to prevent any future problems.
2. Paragraph 3.3.1, Recent Plant-Specific Problems, Westinghouse Steam Generators, Farley Units 1 and 2, page 24.
- a. The statement "Unit 1 previously experienced small, U-bend leaks (below the plant Technical Specification limit) in Row 1 tubes in March, 1979 and December, 1980" is misleading in that, as mentioned in paragraph 1.a., only one leaking tube was characterized (in March, 1979) as having a U-bend type defect. All Row 1 tubes and Row 2 and 3 tubes adjacent to the leaking tube were examined. Exclusive of the leaker, all tubes examined showed no sign of tube wall degradation, thinning or denting. The leaking tube found in December, 1980 was a Row 1 tube, however the defect was not characterized.
 - b. In reference to Unit 2, the statement is made that a tube leak in June, 1981 "may have been caused by a hacksaw blade which was dropped into the general area while upper inspection ports were being in-

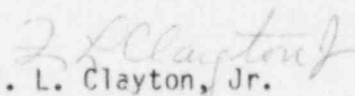
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stalled in the steam generators". This statement is incorrect. The hacksaw blade was dropped during the steam generator moisture carryover modification, which was performed during construction. Furthermore, the hacksaw blade was located and removed in February, 1980.

Two tubes were nicked during the installation of upper inspection ports in the same steam generator. To prevent future problems, these two tubes were plugged and the upper U-bend portions of the tubes were removed. As previously mentioned in paragraph 1.b., this corrective action was taken during construction; therefore these tubes never leaked.

If you have any questions, please advise.

Yours truly,


F. L. Clayton, Jr.

STB:bs

cc: Mr. R. A. Thomas
Mr. G. F. Trowbridge
Mr. J. P. O'Reilly
Mr. E. A. Reeves
Mr. W. H. Bradford