SAFETY EVALUATION REPORT

Introduction

In accordance with the requirements of IE Bulletin 80-13, the Nine Mile Point Unit No. 1 has examined the accessible portions of the core spray spargers and the associated internal piping by a remote underwater TV. Oblique lighting of various angles and intensities was used coupled. with the resolution of 0.001 in. diameter wires to enhance the view of sparger surface.

Description and Evaluation

About 45 hours of videotape of the core spray spargers and internal piping were generated and two cracks were discovered. One crack segment discovered is 1/2" long by 0.02" wide, the other one is 1/4" long by 0.001" to 0.003" wide. Intergranular stress corrosion cracking is considered as the most probable cause of crack initiation. Since all service loadings except for the infrequent and low injection loading are insignificant, the crack propagation initially was caused by residual stresses left in the spargers after its installation. The nature of residual stresses is self-relieving; therefore the propagation shall be limited.

Conclusion

The core spray spargers do not have a structural function; i.e., they are not required to withhold or support any elements other than its own weight. The infrequent and low loading caused by injections will not impair the sparger integrity as the crack opening due to the injection transient is bounded. The cracks thus will have no appreciable effects on structural

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integrity or hydraulic performance. However, it will be desirable to monitor the growth of these cracks in the future. If the results show the necessity, a replacement program similar to the one in Oyster Creek should be adopted.