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SUBJECT: Discusses investigation re microbiological induced corrosion in svc water piping.

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H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261
LICENSE NO. DPR-23
MICROBIOLOGICALLY INDUCED CORROSION

Dear Sir:

This letter is in regard to our continued investigation concerning Microbiologically Induced Corrosion (MIC) in Service Water Piping. As scheduled in our letter of September 10, 1987, radiography of the baseline welds was performed during December 1987. The results of this sampling revealed that the growth rate of 5/8 inch per year previously established was being exceeded. From the December radiography of 29 welds, a new growth rate projection was determined to be approximately 1.6 inches per year. With this projection, it was calculated that a number of unsleeved welds in the Auxiliary Building could exceed the structural limit of 10.19 inches prior to the refueling outage scheduled to begin in August, 1988. Therefore an expanded program for inspection was undertaken to validate this new data.

During the week of January 11, 1988, radiography of the Auxiliary Building welds with the largest predicted MIC growths was completed. This sampling established that the projected growth rate of 1.6 inches was not specifically representative of the entire population of welds. One weld in this sampling had MIC cumulative indications that exceeded the 10.19 inches limit. For this weld, the affected HVH unit was taken out of service, and the repair was made with the Plant in operation.

With the last calculated growth rate projection proven not representative, an effort was begun on January 27, 1988, to radiograph all unsleeved welds in the Auxiliary Building. This baselining effort involved 190 welds. From this sampling, one additional weld had cumulative indications that exceeded the structural limit and 21 exceeded the administrative sleeving limit of 5.0 inches. These welds have been sleeved. Also, those welds projected to be above the administrative sleeving limit of 5.0 inches prior to the August, 1988 outage have been sleeved or evaluated to ensure that the structural limit will not be exceeded.

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Concurrent with the above work, additional analyses were conducted concerning the allowable cumulative indication length limits for 6 inch welds. Specifically, the operability limit was increased from 10.19 inches to 12.0 inches, and the recommended sleeving limit was increased from 5.095 inches to 6.0 inches.

In our letter of September 10, 1987, it was stated that three sleeve fillet welds inside containment would be radiographed to determine the MIC growth rate. From this sampling done in December 1987, the growth rate has been determined to be approximately 1 inch per year. These welds will continue to be monitored, and necessary actions will be taken based on future radiograph results.

The extensive effort to baseline all welds in the Auxiliary Building and to sleeve or evaluate those that will exceed the administrative limit prior to the 1988 Refueling Outage has been completed. To ensure the MIC growth is more closely monitored, the six-month interval radiographic sampling program has been shortened to approximately three months. This surveillance program is structured to provide assurance of the continued structural integrity of the containment HVH Service Water System. Because of the increased corrosion rate, plans are being developed for the replacement of Service Water supply and return piping in containment. Details of this plan will be provided in a future report. A report of the next sampling program results will be submitted at its completion.

If you have any additional questions concerning this submittal, please contact Mr. R. D. Crook, telephone (803) 383-1179.

Very truly yours,

R. E. Morgan
General Manager
H. B. Robinson S. E. Plant

RDC:lko

cc: Mr. W. J. Flanagan
Mr. W. P. Kleinsorge
Mr. L. W. Garner
Dr. J. N. Grace