

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of §  
§  
HOUSTON LIGHTING & POWER COMPANY § Docket No. 50-466  
§  
(Allens Creek Nuclear Generating §  
Station, Unit 1) §

APPLICANT'S MOTION FOR SUMMARY  
DISPOSITION ON INTERVENOR TEXPIRG'S  
CONTENTION NO. 10

Applicant moves the Board under 10 CFR §2.749 to grant summary disposition with respect to Intervenor TexPirg's Contention No. 10 relating to intergranular stress corrosion cracking. As shown in the accompanying statement of material facts as to which there is no genuine issue to be heard, and the affidavits of Dr. Gerald M. Gordon, Louis A. Gunther, and Walter F. Malec, there is no issue to try in this proceeding and Applicant is entitled under §2.749 to have the contention summarily dismissed as a matter of law.

The Contention

TexPirg's Contention No. 10 states:

Applicant has not adequately demonstrated compliance with 10 CFR Part 50, App. A, criterion 31, with regard to intergranular stress, corrosion and cracking. Excessive oxygen levels, superposed loads, and residual stresses may result in ultimate failure of piping, despite altered metal content

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for the ACNGS design, the NRC investigation of stress, corrosion, and cracking problems at similar BWR units was released in December, 1975.

Argument

Intervenor TexPirg's allegation that Applicant does not meet the requirements of 10 CFR Part 50, Appendix A, criterion 31 with respect to IGSCC has no factual basis. In fact, Applicant will use materials for the piping at ACNGS which not only meet applicable NRC requirements, but which virtually eliminate the potential for IGSCC.

As described in the attached affidavit of Dr. Gerald M. Gordon, Applicant has taken appropriate steps to eliminate the potential for IGSCC at ACNGS. In the past, IGSCC has occurred in piping made of stainless steel with normal carbon content (0.05-0.08%). Applicant will use in all piping in the reactor coolant pressure boundary low carbon grades of austenitic stainless steels (0.03% max. carbon), including type 316 nuclear grade stainless steel (less than 0.02% carbon), and plain carbon steel. As the Gordon affidavit states, these low carbon stainless steels and plain carbon steels are known to resist IGSCC.

In addition to the use of low carbon stainless steels and plain carbon steels, Applicant has made other

design changes in order to reduce the potential for IGSCC. For example, in the past, IGSCC has occurred in the recirculation bypass line and central rod drive hydraulic return line; these two lines have been eliminated in the ACNGS design.

The attached affidavit of Louis A. Gunther and Walter F. Malec demonstrates that piping within the reactor coolant pressure boundary of the standby liquid control system, instrumentation of the nuclear boiler system, and instrumentation of the recirculation system will be fabricated from 304L stainless steels which are also highly resistant to IGSCC.

Finally, the ACNGS will be provided with a positive leak detection system to detect uncontrolled leakage from the RCPB. Since IGSCC-induced piping failures produce detectable leakage well before rapidly developing cracks appear, this leak detection system provides additional conservative assurance that IGSCC will not pose a safety hazard at the ACNGS.

In light of the design measures described above, no genuine issue of material fact exists with respect to IGSCC at Allens Creek and Applicant is entitled to a favorable decision as a matter of law.