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 No. 1)	§	
	§	

APPLICANT'S MOTION FOR SUMMARY DISPOSITION ON INTERVENOR DOHERTY'S CONTENTION NO. 28

Applicant moves the Board under 10 CFR § 2.749 to grant summary disposition with respect to Intervenor Doherty's Contention No. 28 relating to control rod ejection accidents. As shown in the accompanying statement of material facts as to which there is no genuine issue to be heard, and the affidavit of Donald L. Peterson 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

Doherty's Contention No. 28 states:

> Applicant's PSAR does not consider the possibility of a control rod ejection accident adequately. This endangers Intervenor's interests with a reactivity insertion accident. Applicant states (p. 15.1-75 of the PSAR) that "In all cases the subsequent withdrawal speeds (that is speeds due to an 'unplanned withdrawal' which are variable) are less than a rod drop accident," inferring the consequences must be less. But, in a

control rod ejection, the rod would be forced out by the containment pressure and possibly the pressure in the SCRAM discharge volume tank (SDVT) would be additional, creating a more rapid rod ejection as opposed to rod drop. That such SDVT pressures have occurred is set forth in TexPirg's Contention No. 32 of May 16, 1979. Rapid pulling of a rod, led to a fatal power excursion with the Stationary Low Power Plant S-L-1 reactor in January, 1961. Applicant should be required to show its control rod system is safe for a control rod ejection accident against transients, calculate the effects on a control rod ejection on the public safety and show why a control rod ejection is impossible.

Argument

Intervenor takes issue with the conclusion in the Preliminary Safety Analysis Report that worst-case postulated control rod ejection accidents are bounded by the rod drop accident. The PSAR conclusion is based on the fact that all possible control rod ejection events produce calculated rod withdrawal speeds less than the control rod drop withdrawal speed. Since reactivity addition rate (rod withdrawal speed) is the determinative factor in resulting energy deposition and, hence, potential fuel damage, the worst-case event is determined by comparing withdrawal speeds in postulated sequences.

Intervenor specifically argues that the above-described comparison fails to account for three items: (1) SCRAM discharge volume pressure acting on a control rod drive (CRD) piston; (2) containment pressure acting on the CRD or CRD piston; and (3) the SL-1 accident. The affidavit of Mr. Peterson examines each item in considerable detail.

First, the Peterson affidavit describes in detail why it is physically impossible for the SCRAM discharge volume pressure to act on the CRD or CRD piston. The affidavit also demonstrates that containment pressure likewise cannot add any force to system pressure forces accounted for in the ejection speed calculations. Most importantly, the Peterson affidavit describes the exacting nature of the calculations performed to determine the rod speeds of those ejections which are theoretically possible, even though probabilistically very remote.

The calculated withdrawal speeds are dependent on known physical quantities such as distance, hydraulic loss, conservation of momentum. Under the most conservative approach, and assuming the most adverse circumstances, the worst rod ejection event can produce a withdrawal speed of only 2 feet per second. The rod drop accident analysis conservatively uses 5 feet per second as a rod withdrawal speed. Hence, the rod drop analysis bounds consideration of rod ejection accidents.

Finally, Intervenor's reference to the SL-1 accident is not relevant to this contention. The SL-1 reactor was totally dissimilar to a BWR and the accident which occurred there could not be repeated at ACNGS. There is no genuine issue of material fact to be tried here, and Applicant is entitled to summary disposition on this contention as a matter of law.