

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

12/6/79

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

HOUSTON LIGHTING & POWER COMPANY

(Allens Creek Nuclear Generating
Station, Unit 1)

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} Docket No. 50-466

NRC STAFF'S RESPONSES TO JOHN F. DOHERTY'S
SEVENTH SET OF INTERROGATORIES

The NRC Staff responds as follows to the seventh set of interrogatories propounded by John F. Doherty to the Staff in the captioned proceeding:

7-1. During the licensing process will there be an ACRS review of Applicant's plans?

Response

The results of the ACRS's review of the application for permits to construct the Allens Creek Nuclear Generating Station, Units 1 and 2 were included in a letter report of December 12, 1974 to the Honorable Dixy Lee Ray, Chairman, U.S. Atomic Energy Commission. This report was included as Appendix I to Supplement No. 1 to the Safety Evaluation Report, June 1975. As stated in Section 18.0 of Supplement No. 2 to the Safety Evaluation Report, "During its 217th meeting held on May 4-5, 1978, the Committee discussed the Allens Creek amended application for one unit only and subsequently advised us that the Committee saw no need to reopen its review of the Allens Creek plant, in view of its previous review and nature of the design changes being proposed."

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On October 10, 1979 the Staff forwarded a letter to Houston Lighting & Power Company on the subject, "Followup Actions resulting from the NRC Staff Reviews Regarding the Three Mile Island Unit 2 Accident." That letter stated that the Advisory Committee on Reactor Safeguards had completed its review of the report titled, "TMI-2 Lessons Learned Task Force Status Report and Short-Term Recommendations" (NUREG-0578) and included the ACRS letter of August 13, 1979 to Chairman Hendie as Enclosure 1. Other reports by the ACRS, on the TMI-2 accident are expected in the future. The Staff will continue to consider any future comments of the Committee in implementing any additional followup actions in the Allens Creek and other facilities.

Other than the continuing TMI-2 reviews, the Staff knows of no other review of the Allens Creek application planned by the ACRS. We will keep the Committee informed of any additional staff review, e.g., the Staff review of the Applicant's November 14, 1979 response to our letter of October 14, 1979.

7-2. Has Applicant complied with Regulatory Guides 1.124 and 1.130 with regard to Class 1 linear plate and shell type supports?

Response

As stated in Section 5.2.1 of Supplement No. 2 to the Safety Evaluation Report the Applicant has provided a commitment that ASME Class 1 linear and plate-and-shell type supports will comply with the criteria contained in Regulatory Guides 1.124 and 1.130. This commitment is acceptable to the Staff at the

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construction permit stage of review. The Applicant may be required to demonstrate compliance during the operating license review, but in any case is responsible for assuring such compliance.

7-3. If not, what alternative criteria have been proposed, if any? (For clarity see p. 7 of 7/21/78 letter to HLP from S. Varga, NRC).

Response

Not applicable.

- 7-5. In the PSAR, it says "...G. E. believes the Recirculation Pump Trip feature combined with the ability to manually shutdown the reactor by inserting rods or by initiating the SLCS provide sufficient protection in view of the very low probability of complete failure to SCRAM."
- a. Does Staff find this analysis acceptable?
 - b. If not, for what reasons does it differ with the G. E. position?
 - c. What is the probability of complete failure to SCRAM according to staff today?
 - d. Does staff believe that low probability can be sufficient protection?

Response"

- a) See response to Interrogatory #6 of the first set of interrogatories.
- b) The ability to manually insert the rods assumes that the common mode failure disables the electrical portion of the scram system while the mechanical/hydraulic portion of the scram system is not disabled and the operator takes early action. Based on our observation of some potential common mode failures in the control rod drive system, we conclude in NUREG-0460, Vol. 1 (p. 29) that the reliability of the rods and the rod drive systems cannot be demonstrated to be much better than the reliability of the electrical portions.

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The Staff does not agree with GE that in the event of an ATWS the plant can be safely shutdown by manual initiation of the SLCS. The Staff judgment is based on the two reasons discussed in a 3/1/79 memo from R. Mattson, NRR, to T. McCreless, ACRS, and summarized here.

- 1) The operating BWR plants do not have the capability to insert sufficient rate of sodium pentaborate solution to assure that the acceptance criteria are not exceeded.
 - 2) The Staff does not believe that there is high degree of confidence in the operator manually initiating SLCS in the first two minutes, especially in view of the high cost of cleaning up the reactor coolant water once SLCS has been initiated.
- c) As discussed in NUREG-0460, Vol. 1, p. 28, the Staff estimates the probability of failure to scram on demand to be in the range of $10^{-4} \sim 10^{-5}$. The Staff recognizes that this estimate of unreliability has considerable uncertainty and believes that this estimate may be less applicable to the hydraulic/mechanical portions of the scram system because of lack of observed failures in significant number of control rods.
- d) It is clear that all conceivable events need not and should not be protected against. The Staff believes that low probability of occurrence of an accident can be used as bases for reaching a conclusion not to require consideration of such an accident if adequate data base exists to support such low probability estimates. Lacking adequate data base, the probability arguments can only be used to supplement engineering judgment regarding the credibility of an accident.

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One or more of the following individuals will testify for the Staff with regard to ATWS related contentions: C. Moon, A. Thadani, H. Richings, and W. Brooks.

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Dated at Bethesda, Maryland,
this 6th day of December, 1979.

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HOUSTON LIGHTING & POWER COMPANY
(Allens Creek Nuclear Generating
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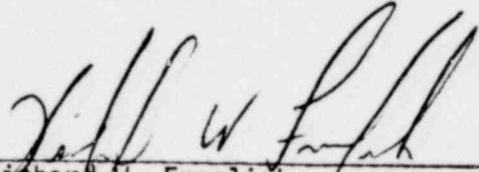
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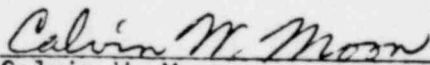
Docket No. 50-466

AFFIDAVITS OF RICHARD W. FROELICH AND
CALVIN W. MOON

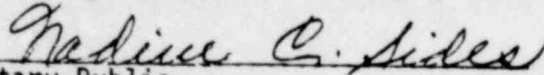
Richard W. Froelich and Calvin W. Moon depose and say under oath:

1. I, Richard W. Froelich, am the NRC Staff's Environmental Project Manager assigned to the application for a construction permit for the Allens Creek Nuclear Generating Station, Unit 1.
2. I, Calvin W. Moon, am the NRC Staff's Licensing Project Manager for the above application.
3. The foregoing NRC Staff responses to interrogatories propounded by John F. Doherty were prepared by us or under our direct supervision. We certify that the answers given are true and correct to the best of our knowledge, information and belief.


Richard W. Froelich


Calvin W. Moon

Subscribed and sworn to before
me this 6TH day of DECEMBER, 1979


Notary Public

1591 077

My Commission expires: July 1, 1982

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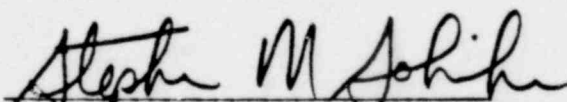
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