

6/26/81

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
SOUTH CAROLINA ELECTRIC & GAS)
COMPANY)
Virgil C. Summer Nuclear Station,)
Unit 1)

Docket No. 50-395



NRC STAFF MOTION TO STRIKE INTERVENOR
PREFILED TESTIMONY

INTRODUCTION

On May 28, 1981, the Intervenor served prefiled testimony of Dr. Michio Kaku on Contentions 8^{1/} and 10^{2/} and, Drs. Helen Caldicott and K. Z. Morgan on Contention 10. The Board encouraged the parties to move to strike objectionable prefiled testimony on an expeditious basis. See "Remainder of Order Following Fourth Prehearing Conference", dated

- 1/ Contention 8 states that:
the Applicant has made inadequate preparations for the implementation of [its] emergency plan in those areas where the assistance and cooperation of state and local agencies are required.
- 2/ Contention 10 states:
The following effects - on a long term basis - have been sufficiently underestimated by the Applicant and the Staff so as to compromise the validity of the favorable Benefit-Cost balance struck at the construction permit phase of this proceeding:
- a) The somatic and genetic effects of radiation releases, during normal operation, to restricted and unrestricted areas, said releases being within the guidelines and/or requirements of 10 CFR Part 20, and Appendix I to 10 CFR Part 50;
 - b) The health effects of the uranium fuel cycle, given the release values of the existing Table S-3 of 10 CFR Part 51.

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May 13, 1981, at 7-8.^{3/} Accordingly, the NRC Staff hereby moves to strike Dr. Morgan's testimony, in part, and Drs. Kaku and Caldicott in their entirety on the grounds that the witness(es) is not qualified to offer an expert opinion on the matters in question or that their testimony is irrelevant to the issues or otherwise constitutes an improper challenge to Commission regulations. The basis for the motion follows.

DISCUSSION

1. Prefiled Testimony of Dr. Kaku on Contention 8

The Commission's emergency planning regulations provide for the establishment of a ten mile plume exposure pathway Emergency Planning Zone (EPZ) for nuclear power plants within which a range of protective actions, including evacuation, must be developed. 10 C.F.R. §50.47(c)(2), 10 C.F.R. Part 50, Appendix E, §IV. The exact size and configuration of the EPZ for an individual facility is determined by considering "local emergency needs and capabilities as they are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries." 10 C.F.R. §50.47(c)(2). The prefiled testimony of Dr. Kaku on Contention 8, in its entirety, patently constitutes a challenge to the Commission's emergency planning requirements relative to the establishment of a ten mile plume exposure pathway EPZ. Dr. Kaku does not state a position on the precise size and configuration of the ten mile EPZ for Summer. Rather, Dr. Kaku states that, as a generic matter, a ten mile EPZ is inadequate. The purpose of Dr. Kaku's testimony is expressly stated as follows: "To show that substantial scientific

^{3/} See also 10 C.F.R. Part 2, Appendix A, §V(d)(7).

objections can be raised contesting this ten mile limit." The prefiled testimony continues: "A logical, compelling case can be made that a ten mile evacuation radius does not take into account the full impact of a class 9 accident at the plant." Prefiled Kaku testimony at 1. The prefiled testimony proceeds with a discussion of certain generic class 9 accident studies and certain alleged power plant incidents to support his theory that a ten mile evacuation limit is inadequate. The prefiled testimony contains no site-specific discussion of local conditions relevant to emergency planning, such as demography, topography, land characteristics, access routes, and jurisdictional boundaries. Nor does the prefiled testimony discuss the Applicant's emergency plans themselves and is further objectionable on relevancy grounds. Contention 8 is nowhere addressed in Dr. Kaku's testimony which displays no familiarity at all with the actual emergency plans for Summer. Accordingly, Dr. Kaku's testimony should be stricken.

2. Prefiled Testimony of Dr. Kaku on Contention 10

Contention 10 challenges the estimation of the long-term health effects due to radiation releases from normal operation and uranium fuel cycle by the Applicant and Staff and their impact on the cost-benefit analysis. Dr. Kaku's prefiled testimony addresses neither.

Contention 10 was the subject of the Applicant's summary disposition motion of May 7, 1981 supported by the Staff on May 27, 1981. Both the motion and Staff response were accompanied by supporting affidavits. The NRC Staff moves to strike Dr. Kaku's testimony on two grounds: relevancy and failure to qualify as an expert witness on the long-term health effects of low-level radiation. Dr. Kaku essentially challenges

the accuracy of the findings of earlier professional radiation studies and their establishment of radiation protection standards. Dr. Kaku does not discuss these studies in the context of the health effects assessment performed by the Staff in the Final Environmental Statement nor specifically challenge the validity of such assessment. On page 10, Dr. Kaku argues that present radiation standards do not provide enough protection for the public health and safety. According to Dr. Kaku, even if these standards are adequate, the "sad enforcement record of the industry" renders these standards ineffective. Prefiled testimony at 10. There is no evidentiary basis to conclude or infer that the Applicant will not comply with the Commission's radiation regulations or criteria. Consequently, this discussion is irrelevant.

Dr. Kaku's prefiled testimony is also objectionable on the grounds that Dr. Kaku is not qualified to testify as an expert on the health effects of radiation. Dr. Kaku appears to be an expert in theoretical physics. He is not, however, a health physicist, a radiation biologist or epidemiologist, nor is there any indication he is knowledgeable about the effects of radiation on human beings. Therefore, Dr. Kaku's testimony should be entirely stricken.

3. Prefiled Testimony of Dr. K. Z. Morgan on Contention 10

The NRC Staff does not challenge Dr. Morgan's expertise in health physics. Nevertheless, portions of his testimony are not relevant to Contention 10. On page 10 of his testimony, beginning with the sentence located at about the middle of the page ("Now, regarding members of the public") through to the conclusion of the paragraph on page 10, Dr. Morgan challenges the sufficiency of presently prescribed exposure levels to protect the public health by discussing doses and nuclear

accidents. This is an impermissible attack on the Commission's regulations;^{4/} moreover, by its plain language, Contention 10 is predicated on acceptance of the release values of Table S-3 and Appendix I.

The answer to the question posed on page 11, with the exception of three sentences on page 12 beginning with the words "According to Victor Archer...." is too unspecific and again constitutes an attack on the regulations. The response to the ALARA standard question found on page 17 is also irrelevant to the contention at issue. The relevancy of the answer on page 16 is also dubious, since Dr. Morgan's response focuses on the subject of radiation doses rather than health effects on humans. Therefore, the referenced portions of Dr. Morgan's prefiled testimony should be stricken.

4. Prefiled Testimony of Dr. Helen Caldicott on Contention 10

The testimony of Dr. Caldicott should be stricken in its entirety because she is not qualified to testify as an expert witness on the health effects of low-level radiation. Dr. Caldicott is a medical doctor. She has no apparent training, education, nor experience to qualify as an expert in health physics, radiation biology or epidemiology. Nor does she possess any apparent expertise in the health effects of ionizing radiation on humans. Hence, she is not competent to testify on Contention 10.

In the main, Dr. Caldicott's testimony is not relevant to Contention 10. Dr. Caldicott's "testimony", as she accurately describes in her May 21, 1981 cover letter, is merely a paper describing the medical

^{4/} See 10 CFR § 2.758.

consequences of class 9 accidents, radioactive waste storage, and the potential proliferation of nuclear weapons. This "testimony" was not prepared especially for this proceeding and consequently, does not address the estimation of health effects from specific releases during normal operation of the Summer Station and the uranium fuel cycle. The broad topics covered in the paper are irrelevant to Contention 10, such as the Three Mile Island accident,^{5/} nuclear reactor melt down,^{6/} spent fuel transportation,^{7/} reprocessing,^{8/} decommissioning,^{9/} breeder reactors,^{10/} and atomic weapons.^{11/} The last sentence on page 5 of the paper challenges the adequacy of "federal guidelines" for allowable radiation levels and thus constitutes an apparent impermissible attack on the applicable Commission regulations.

Dr. Caldicott's report does contain some isolated passages which are arguably relevant to the health effects issue at bar.^{12/} However,

^{5/} Prefiled testimony at 1.

^{6/} Id. at 16.

^{7/} Id. at 17. The environmental effects of spent fuel transportation are contained in Table S-4 to 10 CFR Part 51 and are not within the purview of Contention 10.

^{8/} Id. at 19.

^{9/} Id. at 21.

^{10/} Id.

^{11/} Id. at 23.

^{12/} E.g. page 5, last sentence, first paragraph and last sentence through first full paragraph on page 6; the first full paragraph on page 8; the last sentence in first paragraph on page 13; the second to the last sentence on page 14; and the first sentence in the last paragraph on page 23.

these few isolated passages are so inextricably intertwined with the balance of Dr. Caldicott's testimony that they cannot be segregated. As a result, when viewed in the larger context of irrelevant material in the report, which concentrates more on radiation doses than health risks, even these arguably relevant portions lose their materiality.

CONCLUSION

For the reasons stated above, the prefiled testimony of Dr. Kaku on Contentions 8 and 10 and Dr. Caldicott on Contention 10 should be stricken in their entirety. The prefiled testimony of Dr. Morgan on Contention 10 should be stricken, in part, as referenced above.

Respectfully submitted,

Myron Korman

for Steven C. Goldberg
Counsel for NRC Staff

Dated at Bethesda, Maryland
this 26th day of June, 1981.

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CERTIFICATE OF SERVICE

I hereby certify that copies of NRC STAFF MOTION TO STRIKE INTERVENOR PREFILED TESTIMONY in the above-captioned proceeding, were hand delivered to the Board and Parties at the hearing held in Columbia, S.C. on June 25, 1981. Copies have been served on the following by deposit in the United States mail, first class or, as indicated by an asterisk, through deposit in the Nuclear Regulatory Commission's internal mail system, this 26th day of June, 1981.

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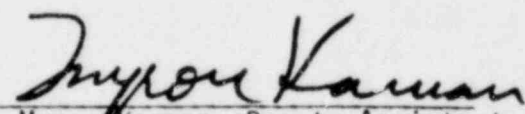
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