

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:
Herbert Grossman, Chairman
Dr. Frank F. Hooper
Gustave A. Linenberger



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In the Matter of)
)
SOUTH CAROLINA ELECTRIC AND)
GAS COMPANY, ET AL.)
)
Virgil C. Summer Nuclear Station,)
Unit 1))
_____)

Docket No. 50-395 0L

September 14, 1981

MEMORANDUM AND ORDER
(Ruling on the Admissibility of
Dr. Kaku's Prospective Testimony)

MEMORANDUM

On May 28, 1981, the Intervenor submitted prefiled testimony of Dr. Michio Kaku on Contentions 8^{1/} and 10^{2/}. On June 25, 1981, the Staff served a motion to strike the prefiled testimony of Dr. Kaku on both Contention 8 and Contention 10. The motion stated that the prefiled testimony of Dr. Kaku on Contention 8, in its entirety, patently constituted a challenge to the Commission's

1/ Contention 8 states that:

The Applicant has made inadequate preparations for the implementation of emergency plan in those areas where the assistance and cooperation of state and local agencies are required.

2/ Contention 10 challenges the validity of the favorable cost-benefit balance in light of the alleged underestimation of the long term health effects of permissible levels of radiation.

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emergency planning requirements relative to the establishment of a ten mile plume exposure pathway emergency planning zone (EPZ) under 10 C.F.R. § 50.47(c)(2) and 10 C.F.R. Part 50, Appendix E, Section IV.

Dr. Kaku did not state a position on the precise size and configuration of the ten mile EPZ for Summer or a site specific basis, but rather, indicated that, as a generic matter, a ten mile EPZ is inadequate. The purpose of Dr. Kaku's testimony was stated as follows:

It is the purpose of this statement to show that substantial scientific objections can be raised contesting this ten mile limit. 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.

The prefiled testimony proceeded 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.

After entertaining argument from the parties at the June 30, 1981 hearing session, the Board ruled to strike Dr. Kaku's prefiled testimony on Contention 8 on the grounds that it constituted a challenge to the Commission's emergency planning requirements regarding the establishment of a ten mile plume exposure pathway EPZ. Tr. 1693-1736.

The Board excluded the prefiled testimony of Dr. Kaku on Contention 10 on the grounds that it was unduly repetitious of the direct testimony of Intervenor witness Dr. K. Z. Morgan on the same subject. Tr. 1727.

On June 30, 1981, the Intervenor distributed a new introductory page to the prefiled testimony of Dr. Kaku on Contention 8. This page disclaimed any purpose in challenging the adequacy of the ten mile EPZ but rather stated that the prefiled testimony should be regarded as challenging the ability of the emergency plans to cope with a severe Class 9 accident. The substantive portions of the prefiled testimony were unchanged.

After argument, the Board reaffirmed its ruling to exclude the prefiled testimony and indicated that it would provide the Intervenor with the opportunity to make an offer of proof and the other parties an opportunity to voir dire or cross examine Dr. Kaku. Tr. 2102.

The offer of proof of Dr. Kaku's prefiled testimony was made on July 16, 1981. During the pendency of the offer of proof the Board reversed its ruling and decided to admit Dr. Kaku's testimony over the continued objections of the Applicants and Staff. Tr. 3621. The Staff moved the Board to immediately refer its ruling to the Appeal Board pursuant to 10 C.F.R. § 2.730(f). Tr. 3624-25. The Board denied this motion. Tr. 3626.

Voir dire of Dr. Kaku was conducted by the Applicants and Staff on July 16-17, 1981. Tr. 3350-3705. Thereafter, the Applicants and Staff renewed their motions to strike Dr. Kaku's testimony. Dr. Kaku was permitted to personally respond to the Applicants and Staff's motion. Tr. 3730-3743. After hearing additional argument on the issue, the Board decided to reserve a ruling on whether to accept Dr. Kaku's prefiled testimony in whole or in part until it afforded the parties an

opportunity to file written briefs and statements of position on the matter. Tr. 3761. The Board ordered that the parties' briefs be filed by August 3, 1981 with reply briefs due by August 17, 1981.

By agreement, the dates for filing were extended to August 7, 1981, and August 21, 1981, for the opening and reply briefs, respectively. The parties filed their opening briefs on time and the Applicants and Staff filed their reply briefs on time. Intervenor filed a motion for an extension to file his reply brief by September 4, 1981. At a conference call held on September 4, 1981, at which Mr. Bursey was not present, the Board indicated it would grant that extension. However, no reply brief was filed and, on September 9, 1981, Dr. Kaku placed a call to the Board Chairman and spoke to the Chairman's secretary indicating that he was requesting a further extension until September 14, 1981. He called on September 10, 1981, and was informed by the secretary that his request for further extension would probably not be granted and that the Board would act on the papers already submitted. He was further informed that he could request in the alternative that his prospective motion for extension be treated as a motion for reconsideration.

For the reasons stated below, we would admit from the prefiled testimony of Dr. Kaku, only paragraphs 9 and 10 (as illustrations, from past examples, of accidents that might precipitate the use of an emergency plan), and the portion of the accident sequence given in paragraph 12 beginning with 12:00 o'clock and ending with the penultimate sentence at 7:00 o'clock.

Excluded Testimony

The bulk of the excluded testimony consists of specific postulated Class 9 accidents, challenges to the probabilities studies relied upon by the NRC, and certain generic safety issues, none of which are relevant to the emergency planning contention or any other contention that we have admitted. That these alleged safety deficiencies might result in an emergency is too tenuous a connection with the emergency planning contention to permit that contention to be used as an umbrella for raising new safety issues at this late stage in the proceeding. With regard to one safety issue already raised as a contention, involving defective welds, we see nothing in paragraph 3 of Dr. Kaku's proposed testimony that would add anything to the record already established other than some argumentation that should properly be made by the Intervenor in his requested findings and conclusions of law.

The remainder of the testimony that we would not admit, including portions of the accident sequence, appears to be a challenge to the approximate 10-mile plume exposure pathway Emergency Planning Zone adopted by the Commission in 10 CFR §§50.33 and 50.47. The amendment to Dr. Kaku's prefiled testimony, submitted to the Board on July 1, 1981, appears to recognize that those portions of the testimony which challenge the regulations in that respect cannot be entertained at the hearing.

Admissible Testimony

With regarding to the portions of the testimony that we would admit, we have carefully considered all of the objections raised by

Applicants and Staff. Dr. Kaku's graduation, summa cum laude, from Harvard University where he was No. 1 in his physics class and Phi Beta Kappa, his Ph.D. in physics, his election as fellow of the American Physics Society, his current professorship at the City College of the City University of New York, his prior service on the faculty at Princeton University, and his work and publications in nuclear physics, satisfy us with regard to his qualifications to testify on matters we would admit. Any deficiencies with regard to his nuclear background that may have been disclosed on voir dire go to the weight of his testimony, rather than to his qualifications. To construe the qualifications requirements as narrowly as Staff and Applicants, would reserve the status of expert only to a very few persons employed by the Staff or the nuclear industry.

We do not find the testimony we would admit a challenge to the Commission's regulations, although we do agree that it is inconsistent with the statement in NUREG-0654, FEMA-REP-1, Rev. 1, p. 6, that, "No single specific accident sequence should be isolated as the one for which to plan because each accident could have different consequences, both in nature and degree." However, NUREG-0654 is Federal Emergency Management Agency and NRC Staff guidance to licensees, and state and local governments, not to the licensing boards. Nor, does it have the force of NRC regulations, although NUREG-0654 was noted in 10 CFR 50.47(b), fn. 1 as containing specific criteria that address the standards of Section 50.47. Furthermore, to the extent that 10 CFR § 50.47(b) establishes standards which require a judgment as to whether

emergency facilities, equipment, methods, systems, etc., are "adequate" (§ 50.47(b)(8), (9)), and does not specify the numbers of contaminated injured individuals to be provided for (§ 50.47(b)(12)), we do not see how the emergency plans can be evaluated without considering possible accidents, at least in general. We are fortified in our position that a consideration of accident sequences with regard to an emergency planning issue is not contrary to Commission regulations by the recent issuances of another Atomic Safety and Licensing Board in Southern California Edison Company (San Onofre Nuclear Generating Station, Units 2 and 3), dated July 29, 1981 and August 7, 1981, which required evidence with regard to possible earthquakes sequences in considering the implementation of emergency plans.

With regard to the Staff's arguments in opposition to admitting the testimony on grounds that it is irrelevant, we note in particular the arguments stated in its brief of August 7, 1981, beginning at the bottom of p. 6 and continuing through p. 9. We view these arguments as being responses to the merits of what Dr. Kaku would testify to, rather than reasons for not admitting the testimony, and expect that they would be raised by competent staff witnesses at hearing to rebut the positions stated by Dr. Kaku.

Referral Under 10 C.F.R. §2.730(f)

Finally, having decided to admit the portions of Dr. Kaku's prefiled testimony specified above, we cannot accede to the Staff's request that we refer the ruling to the Appeal Board pursuant to 10 CFR

§ 2.730(f). We do not take the position, which apparently underlies the Staff's request, that only clear-cut issues may be resolved by the Licensing Board without immediate referral to the Appeal Board, even though the question to be decided may involve a possible inconsistency between the Commission's regulations and staff guidance. The standards set in § 2.730(f) with regard to the referral of interlocutory rulings concern "detriment to the public interest or unusual delay or expense," and not to the degree of confidence one might have in the correctness of a licensing board's ruling or an ambiguity in published guidance. We see very little delay resulting from the admission of those limited portions of Dr. Kaku's testimony, which would require (in our estimation) very limited rebuttal on the part of the Applicants and Staff.

ORDER

For all the foregoing reasons and based upon a consideration of the entire record in this matter, it is this 14th day of September, 1981,

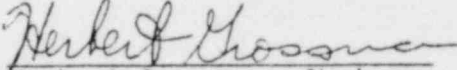
ORDERED,

(1) that paragraphs 9 and 10, and the portion of paragraph 14 beginning with 12:00 o'clock and continuing through the penultimate sentence of 7:00 o'clock, in Dr. Kaku's prefiled testimony will be admitted if offered at the session of hearing beginning on September 22, 1981;

(2) that the remainder of Dr. Kaku's prefiled testimony will be excluded; and

(?) that the Staff's motion for referral under 10 C.F.R.
§ 2.730(f) is denied.

FOR THE ATOMIC SAFETY AND
LICENSING BOARD


Herbert Grossman, Chairman
ADMINISTRATIVE JUDGE

Dated at Bethesda, Maryland
this 14th day of September 1981.