

1281

UNITED STATES OF AMERICA
ATOMIC ENERGY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

IN THE MATTER OF)
)
CAROLINA POWER & LIGHT COMPANY) Docket Nos. 50-400
) 50-401
(Shearon Harris Nuclear Power) 50-402
Plant, Units 1, 2, 3 and 4) 50-403

OUTLINE OF TESTIMONY
OF
DAVID H. MARTIN

QUALIFICATIONS

Education: Bachelor of Science, Presbyterian College, 1943. Master's Degree in Physics from the University of Wisconsin in 1950. Graduated Oak Ridge School of Reactor Technology in 1951.

Work and Teaching Experience: One year as mathematics instructor at Presbyterian College. Five years in reactor physics at Atomics International. Approximately two years in study group related to nuclear airplane studies at Douglas Aircraft Co. From 1958 to present, faculty member in Physics Department at North Carolina State University.

Also, part-time lecturer in nuclear engineering at UCLA; lecturer-consultant for Oak Ridge traveling program, consultant to ASTRA, Inc. in reactor physics.

Publications: Have written a number of research



publications in reactor physics, atomic physics and in related areas of scientific technology.

SPECIFIC TESTIMONY

I wish to comment on two areas related to the public safety of the Shearon Harris Nuclear Plant. These areas are, first, the monitoring, which should produce a warning system for the population around the plant, and, second, the evacuation plan for the cities near the plant.

Both of these systems or plans become extremely important in the event of a major reactor accident, followed by a large release of windborne fission products. Since the magnitude of the probability of such an event has not been established, it appears necessary to take whatever steps are possible to alleviate the consequences of such a catastrophe, should it occur.

On contention C.1. concerning radiological monitoring and surveillance:

First, with regard to monitoring, I find that the documents available show no continuous monitoring outside the boundaries of the plant. As I understand the proposed system, meteorological data will be used to attempt to predict the course of a released radioactive cloud, after it leaves the plant. The accuracy of such a method can be debated: slight changes in wind or weather could make the results invalid. Certainly, the only way that the position, concentration, and

motion of the cloud can be accurately known is by continuously monitoring its course. Such information is important to the safety of the surrounding population centers, and I feel that the present system is not adequate to obtain it.

On contention C. 4 and C.14, concerning evacuation plans:

Next, with regard to the question of a planned evacuation of surrounding cities, I do not find any detailed study or plan in the available documents. If such a study is forthcoming, then it should be scrutinized at this hearing.

Certainly, serious questions about evacuation come to mind: Is evacuation of a city like Raleigh really possible in a short time? With limited information about the location of the approaching radioactive cloud, is there a best way to go? If the answers to such questions are negative, then it seems to me that this public hearing is the appropriate place for this information to be brought into public light.