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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

Glenn O. Bright
Dr. James H. Carpenter
James L. Kelley, Chairman

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

In the Matter of

CAROLINA POWER AND LIGHT CO. et al.
(Shearon Harris Nuclear Power Plant,
Units 1 and 2)

Docket 50-400 OL

ASLBP No. 82-468-01
OL

Wells Eddleman's Partial Response and Contentions
re Emergency Plan (Offsite)

Due to illness and other work in this case and etc, including my teaching job, I have not yet completed a review of the Emergency Plan.¹ However, I have some assistance promised from a volunteer expert, and am filing what I can today.¹ Per oral order in the March 8, 1984 conference call (transcribed), this pleading also addresses certain site emergency plan contentions¹ 157 and 151. (see TR 778, Mar. 8 '84 call)

Re contention 151, it is not clear the doctors will actually have training adequate to cope with radiation-induced injuries at Harris; also it is not clear whether the doctors are bound to stay in the area near Harris or to continue to be bound by their agreements in the future.

¹Under an agreement with Staff counsel and Applicants' counsel, orally approved by Judge Kelley, I'm to file what I can now, and the rest by April 9th. The expert has not been available recently; Applicants' failure to complete the Emergency Plan filing as scheduled has turned out to put it in a time frame that the expert has less time available in. Whatever is completed will be sent to Board, Applicants and Staff as completed, and to other parties April 9, by informal arrangement with Applicants.

Concerning contention 157, Applicants argue (as they almost always do) that you can't make them be one whit safer than the rules require. But in fact, a logical connection between a problem and failure to protect the public health and safety is also grounds for a contention. The TSC must be able to perform its functions in the tense, panicky atmosphere of a real general emergency -- perhaps even a Class IX accident. Human factors must be adequately considered under conditions of high stress, crowding, possible panic, information overload, tiredness (e.g. an accident lasting for several days, e.g. TXMI-2), and the ability of the equipment to reduce rates of error, provide needed information, and be used continually under such conditions. Obviously, for example, adequate information about the height, speed, direction and location of any radioactive puffs or plumes leaving the plant is vital to protecting the public health and safety during an accident, for setting up sheltering or ordering evacuation.

Contentions re emergency plan:

200. The participating organizations's signatures are not provided. At a public meeting in Chapel Hill NC, recently, as part of the UNC Symposium 1984, Dept of Crime Control and Public Safety emergency planners stated that this was a preliminary plan. Thus, the plan is incomplete and not ready to be implemented. There is no assurance it will be implemented since no one has signed it. The NC Dept of CC&PS considers it a draft only. Without participating organizations, the plan cannot work. Mr. Leon Campo, a member of the NY governor's Shorham task force, stated as much at the UNC meeting.

201. The plume exposure pathway is falsely based (part 1, p.1, item II.A.3.c) on the assumption that in the worst core melt sequences, immediate life threatening doses would not occur outside the 10-mile x zone. For contradiction of this, see NUREG/CR 2239, pp. 2-44, 2-45 and 2-48 which point out how lives can be saved by sheltering out to 25

miles from a nuclear plant in a severe accident. Note that conversion by the factors in the tables on pp 2-21/22 and (p. C-4 & (chart) for Harris site population (p.C-20) don't zero the early fatalities out to 25 miles. Nor does correction for 900 MWe (Harris) vs. 1120 in NUREG/CR 2239.

202. PP. 2-42 and 2-43 ~~XXXX~~ of NUREG/CR-2239 show that in a worst case substantial early fatalities would result out to 25 miles around a reactor accident, yet evacuation to 25 miles could reduce fatalities significantly, a factor of 5.2 in the mean case and 2.5 in the 99%-ile (near-"worst") case. The plan, p.1 of part 1, is thus wrong to set a 10 mile evacuation distance based on the assumption of no early fatalities outside 10 miles from the plant. See P. C-4 re SST1 accident at Harris. Reduced effects due to Harris being 900 MWe instead of 1120 are only about ~~30~~ 20%.

203. Page 4, item 5 says it will take about 2 hours to get the SERT (State Emergency Response Team) assembled. But in 2 hours at the 7+ mph average wind speed around Harris, a plume can travel about 15 miles. Thus the plan is not adequate for rapidly developing accidents or unexpected radiation releases, e.g. from an ATWS accident or from a power excursion accident blowing the lid off the reactor vessel (American Physical Society, review of Rasmussen Report, 1975 Supplement). The plume will be over people before the plan is functioning.

204. Plan, page 13, points out the lack of radiation protection on National Guard helicopters. No other method of radiation-protected evacuation for victims or patients who need life-support is provided. This is inadequate protection of such persons, e.g. from Apex hospital within 7 miles of Harris plant.

205. The plan is inadequate for evacuation under snow conditions, which would also produce large radiation doses under the plume. Most Carolinians cannot drive well in snow; panic would contribute to accidents, especially for evacuation at night in a snow storm. There would not be sufficient transport to evacuate hospital and nursing home patients and prisoners and persons w/o transportation under such conditions. Accidents would lead to bottlenecks and prevent successful evacuation.