

January 7, 1985

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

DOCKETED  
USNRC

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

Jan -9 11:00

In the Matter of )  
 )  
CAROLINA POWER & LIGHT COMPANY )  
AND NORTH CAROLINA EASTERN )  
MUNICIPAL POWER AGENCY )  
 )  
(Shearon Harris Nuclear Power Plant) )  
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OFFICE OF SECRETARY  
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Docket No. 50-400 OL

APPLICANTS' STATEMENT OF MATERIAL FACTS AS TO WHICH THERE IS NO  
GENUINE ISSUE TO BE HEARD ON EDDLEMAN CONTENTION 215(1)

Pursuant to 10 C.F.R. § 2.749(a), Applicants state, in support of their Motion for Summary Disposition of Eddleman 215(1), that there is no genuine issue to be heard with respect to the following material facts:

1. Eddleman Contention 215(1) challenges the assumption of evacuation from home contained in the evacuation time study for the Shearon Harris Nuclear Power Plant ("ETE") prepared by HMM Associates, Inc. It claims that this assumption is "unrealistic" for certain times of the day, and could result in double-counting of persons who both live and work within the EPZ.

2. The Harris ETE utilizes a state-of-the-art computer simulation designed to project evacuation times as accurately as possible. From a practical standpoint, it is necessary to use certain simplifying assumptions in order to develop input data that can be effectively used for the computer simulation. Where the simplifying assumptions have potential for error, HMM Associates attempted to balance the over-predictive versus the under-predictive assumptions to compile scenarios that are realistic. Klimm Affidavit,

¶4.

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3. The assumptions used in the ETE were based upon (1) informal discussions held with state and county emergency preparedness officials throughout the course of the study; (2) reviews by HMM Associates, Inc. of empirical data on past evacuations; (3) knowledge and experience obtained HMM Associates in conducting similar evacuation time studies for more than 20 nuclear power plant sites throughout the country; and (4) federal guidance contained in NUREG-0654, Rev. 1. These assumptions were reviewed with numerous state and local emergency preparedness officials. Klimm Affidavit ¶ 5.

4. The ETE does include the assumption that "[t]he auto-owning permanent [resident] population segment will evacuate from their places of residence." ETE at 2-2; Klimm Affidavit ¶ 6.

5. While it is true that the exact locations of people within the EPZ when notification is initiated will vary depending upon such factors as the time of day, day of week and season of the year, assuming that persons will evacuate from their home is reasonable in developing evacuation time estimates. An actual evacuation will only take place after the initial notification, mobilization and preparation. Preparation to evacuate includes the formation of family units and packing clothing, personal goods and valuables. As necessary, these preparation functions may require intermediate travel from the place at which notification is received to home. Klimm Affidavit, ¶ 6.

6. The assumption that persons will travel to their homes before evacuating is borne out by the available literature on past evacuations for natural disasters. Families usually seek to unite during emergencies and persons will usually travel to their place of residence to do so unless presented with sound emergency directions to the contrary. The assumption of evacuation from home is fully supported and realistic. Klimm Affidavit ¶ 6; Mileti Affidavit to be filed separately.

7. The assumption of evacuation from home has been utilized by HMM Associates in each of the more than 20 evacuation time studies that it has prepared for other nuclear power plant sites. Most of these studies have already been found acceptable by

the NRC, and the remaining studies are currently under review. Klimm Affidavit, ¶¶ 4,6.

8. The methodology used in the ETE accounts for preparation time before the actual evacuation. Based upon discussions with local emergency preparedness officials, it was concluded that permanent resident households would begin to evacuate between 30 and 150 minutes after the initial notification. This represents a time range associated with a number of preparation and mobilization activities, including leaving work, traveling home and uniting with the family before evacuating, closing places of business and returning home from shopping trips. Klimm Affidavit, ¶ 7.

9. The Harris ETE deliberately incorporates some double-counting of population segments in order to more realistically simulate evacuation traffic flow conditions. Employees at major places of employment, persons visiting major recreation areas, and school children are counted separately. Those persons in these population segments who also live within the EPZ are counted again in the permanent population estimates. Klimm Affidavit, ¶¶ 8-9.

10. Vehicles will be evacuating the major recreation areas in the EPZ whether they are destined for homes within the EPZ or traveling directly to areas outside the EPZ. Similarly, during work periods, employees will be departing from their places of employment, destined either for homes within the EPZ or traveling to areas outside the EPZ. For these reasons, limited double-counting of these population segments results in a more realistic simulation of vehicle activity during an evacuation. Klimm Affidavit, ¶ 8.

11. Double-counting of school children who also live in the EPZ does not result in an overestimate of evacuation times. When a child evacuates directly from school, the rest of his or her family will depart from the residence but with one less passenger in the car. Thus, total vehicle activity is unaffected by the double-counting of school children. Klimm Affidavit, ¶ 9.

12. The assumption of evacuation from home is a realistic assumption which results in realistic estimates of the evacuation times from the Harris EPZ. It is not a "conservatism" that results in an overestimate of evacuation times. Klimm Affidavit, ¶ 10.

Submitted by:

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