

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

DOCKETED  
USNRC

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In the Matter of

CAROLINA POWER AND LIGHT COMPANY AND  
NORTH CAROLINA EASTERN MUNICIPAL  
POWER AGENCY

(Shearon Harris Nuclear Power Plant,  
Units 1 and 2)

Docket Nos. 50-400 OL  
50-401 OL

OFFICE OF SECRETARY  
DOCKETING & SERVICE  
BRANCH

AFFIDAVIT OF EVANGELOS C. MARINOS IN SUPPORT OF  
NRC STAFF RESPONSE TO APPLICANTS' MOTION FOR  
SUMMARY DISPOSITION ON EDDLEMEN CONTENTION 45 (WATER HAMMER)

State of Maryland )  
County of Prince Georges ) SS

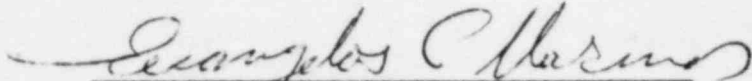
I, Evangelos C. Marinos, having first been sworn, hereby states as follows:

1. I am presently employed with the U.S. Nuclear Regulatory Commission as a Reactor Engineer in the Reactor Systems Branch, Office of Nuclear Reactor Regulation, with responsibility for evaluation of the design of reactor systems and components, from the standpoint of functional capability, integrity and operation during normal, transient and accident plant conditions.
2. Prior to joining the NRC staff in December of 1972, I was employed by the Detroit Edison as Senior Technical Specialist (from 1965 to 1972). I was responsible for the design of reactor safety systems and balance of plant systems.

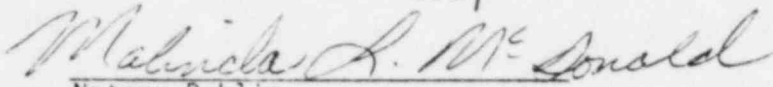
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3. I graduated from Wayne State University with MSEE (1971) and from Purdue University with BSEE (1965). Also, completed a utility oriented, full year of Power Engineering Study and a full year of Nuclear Engineering Study sponsored by Detroit Edison, Wayne State University and Nuclear Services Corporation.
4. This affidavit is made in support of the Applicants' motion for summary disposition of Eddleman Contention 45, regarding the adequacy of the ECCS system design to comply with the requirements of functional integrity of the system by minimizing the frequency and consequences of water hammer events.
5. The ECCS design and implementation, discussed in the Carlson affidavit at [46-51] and the Shah affidavit at [18] provides an acceptable method for addressing the water hammer issue.
6. Additionally, the Staff requires that the ECCS design have provisions to ensure that ECCS injection lines are maintained in a filled condition, to preclude the possibility of a water hammer when injection flow is initiated. The design will achieve that purpose. That the lines are actually filled with water is a matter that will be verified in the pre-operational testing.

7. I conclude that the ECCS system proposed by the Applicants presents little or no concern in regard to water hammer.

  
Evangelos C. Marinos

Subscribed and sworn to before  
me this 2nd day of ~~June~~, 1984  
July

  
Notary Public

My commission expires: 7/1/86