May 16, 1984

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
CAROLINA POWER & LIGHT COMPANY	)	Docket Nos. 50-400 OL
and NORTH CAROLINA EASTERN	)	50-401 OL
MUNICIPAL POWER AGENCY	)	
	)	
(Shearon Harris Nuclear Power	)	
Plant, Units 1 and 2)	)	

APPLICANTS' STATEMENT OF MATERIAL FACTS
AS TO WHICH THERE IS NO GENUINE ISSUE
TO BE HEARD ON JOINT CONTENTION VII

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

1. The Shearon Harris Nuclear Power Plant ("Harris Plant") will use three Westinghouse Electric Corporation ("Westinghouse") Model D-4 steam generators, each containing 4578 steam generator tubes of Inconel 600 material, to produce steam to drive the steam turbines to generate electricity. Affidavit of Thomas F. Timmons ("Timmons Affidavit") at ¶ 8.

2. Westinghouse steam generators using Inconel steam generator tubes have operated for over four million tube-years and have experienced only five tube rupture events. Affidavit of Michael J. Hitchler ("Hitchler Affidavit") at ¶¶ 11, 12.

3. Based on the historical record of steam generator tube integrity in all operating Westinghouse plants with Inconel tubes, statistically a tube rupture event would be expected to occur at the Harris Plant only once in forty-five years. See id. at ¶ 14.

4. To minimize flow induced vibration in the preheater section of the Model D-4 steam generators to be used at the Harris Plant, Westinghouse has recommended that Carolina Power & Light Company ("CP&L") modify its steam generators by: 1) expanding 124 steam generator tubes at the baffle plates in the preheater section and 2) bypassing 18% of the feedwater flow from the main feedwater nozzle to the auxiliary feedwater nozzle. Timmons Affidavit at ¶ 28.

5. The modifications recommended by Westinghouse have been reviewed by the Counter Flow Steam Generator Owners Review Group and approved by the NRC Staff. Affidavit of Alan B. Cutter ("Cutter Affidavit") at ¶ 9.

6. CP&L has implemented the steam generator tube expansion and the feedwater flow diversion as recommended by Westinghouse. Id. at ¶ 8.

7. The modifications recommended by Westinghouse will enable the Harris Plant to operate safely at rated capacity without measurable wear of the steam generator tubes from flow-induced vibration. Timmons Affidavit at ¶¶ 42, 43.

8. As a result of extensive testing for means of preventing problems with stress corrosion cracking and "thinning"

of steam generator tube walls, Westinghouse has recommended that CP&L utilize All Volatile Treatment ("AVT") water chemistry in the secondary side of the Harris Plant steam generator system. Timmons Affidavit at ¶ 53.

9. To eliminate the possibility of crevice corrosion in the tubesheet CP&L has modified the original Westinghouse design for partially-rolled steam generator tubes to include tubes rolled through the full length of the tubesheet. Cutter Affidavit at ¶ 14.

10. CP&L will implement the use of integrally-grooved condenser tubesheets to monitor and eliminate circulating water intrusion into the condensate system. Id. at ¶ 15.

11. In order to lower the amount of copper corrosion products introduced into the feedwater system, CP&L will use copper-nickel alloy condenser tubes rather than admiralty condenser tubes and has installed a deep-bed, full-flow condensate polisher to trap copper corrosion products before they enter the feedwater stream. Id. at ¶ 16.

12. Westinghouse has confirmed that the use of copper-alloy condenser tubes utilized in conjunction with a deep-bed, full-flow condensate polisher is acceptable and will result in a low risk of steam generator tube corrosion. Id.

13. CP&L also will design and install a recirculating wet lay-up system for use during outages in order accurately to control steam generator water chemistry during idle periods and thereby reduce the potential for general surface corrosion of the internal carbon steel surfaces. Id. at ¶ 17.

14. CP&L intends to implement oxygen control measures and to monitor for oxygen to minimize air-leakage to the condensate system and remove air from the feedwater system. Id. at ¶ 21.

15. The use of AVT water chemistry with the design and program features set forth in Paragraphs 9 - 14 above is in accordance with Westinghouse and EPRI guidelines. Id. at ¶ 16.

16. The use of AVT water chemistry with the design and program features which have been, or will be, implemented at the Harris Plant reduces the probability of tube failure events by a factor of two when compared with historical experience. Hitchler Affidavit at ¶ 20.

17. Due to the material properties of Inconel 600 -- which result in tube leaks before tube failure -- and CP&L's ability to monitor the system for leakage of primary fluid into the secondary coolant, the Harris Plant can be shut down for repairs rather than experience tube failures, even if tube corrosion develops. Timmons Affidavit at ¶ 64; Cutter Affidavit at ¶¶ 33 - 36.

18. CP&L has committed to an extensive effort of design modifications, maintenance, inspection and training during all phases of construction and operation to prevent the introduction of foreign objects into the steam generator system at the Harris Plant. Cutter Affidavit at ¶ 24.

19. CP&L has procured a Westinghouse Digital Metal Impact Monitoring System ("DMIMS") for the purpose of detecting loose objects in the reactor coolant system and steam generator

secondary side, which will be installed in accordance with Westinghouse recommendations. Id. at ¶ 30.

20. The DMIMS continuously monitors the reactor coolant system and steam generator for loose parts and automatically actuates audible and visual alarms if the signal it receives exceeds a preset alarm level. Affidavit of Glenn E. Lang ("Lang Affidavit") at ¶ 4.

21. The DMIMS accelerometers have a linear response between 0.005 KHz and 20 KHz, enveloping the frequency range of 2 KHz to 10 KHz at which signals from metallic impacts are expected to be found; the DMIMS system has been tested for weights of .25, .5, 1.0, 2.0 and 3.0 pounds and produced acceptable responses. Id. at ¶ 7.

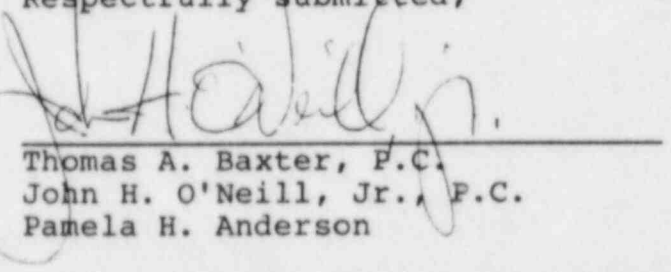
22. CP&L's program for control and detection of loose parts decreases the possibility of a tube rupture event by a factor of five in comparison with historical experience. Hitchler Affidavit at ¶ 21.

23. It is estimated that design and program features which reduce flow-induced tube vibration, implement the effective use of AVT water chemistry and preclude the presence of loose parts in the steam generators will decrease the anticipated frequency of tube failure events at the Harris Plant from one per 45 years to less than one in 120 years. Affidavit of Dr. William H. Wilkie ("Wilkie Affidavit") at ¶ 8. Thus there is reasonable assurance that the steam generators at the Harris Plant will maintain their integrity and the public health and safety will be protected.

24. The higher degree of steam generator tube integrity in the Model D-4 steam generator, as modified by CP&L, should result in lower radiation exposure to maintenance personnel due to a decreased requirement for maintenance of steam generators. Id. at ¶ 10.

25. Applicants' intended use of the Harris Plant Model D-4 steam generators is consistent with the As Low As Is Reasonably Achievable ("ALARA") criterion. Wilkie Affidavit at ¶ 12.

Respectfully submitted,



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