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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	Docket No. 50-400-LA
CAROLINA POWER & LIGHT	)	
COMPANY	)	ASLBP No. 99-762-02-LA
	)	
(Shearon Harris Nuclear Power Plant)	)	
	)	

NRC STAFF RESPONSE TO THE ATOMIC SAFETY AND LICENSING BOARD'S REQUEST FOR ADDITIONAL INFORMATION

I. INTRODUCTION

On March 21, 2000, the Atomic Safety and Licensing Board's (Board) issued a Memorandum and Order (Requesting Additional Information), seeking the parties' views on the relevance, if any, of the Nuclear Regulatory Commission staff's (Staff) "Draft Final Technical Study of Spent Fuel Pool Accident Risk at Decommissioning Nuclear Power Plants" (Feb. 2000) (Study), to the issues pending before the Board concerning the Board of Commissioners of Orange County's (BCOC) motion requesting the admission of late-filed contentions.<sup>1</sup> As more fully discussed below, the Study is not directly relevant to the issues before the Board.

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<sup>1</sup> The Staff notes that BCOC's experts were well aware of the pendency of the Study. Gordon Thompson filed comments on the Initial Draft Study published for comment in June of 1999. David Lochbaum participated in meetings regarding the Study and received a copy of the Study by letter dated February 15, 2000.

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## II. DISCUSSION

The issue before the Board is whether BCOC has submitted admissible contentions pursuant to NRC regulations and case law. As argued in the “NRC Staff Response to Intervenor’s Request for Admission of Late-Filed Contentions” (Staff Response) (March 3, 2000), BCOC has not submitted an admissible contention. The contentions proffered do not meet the standards for admission in an NRC proceeding. *See* Staff Response at 4, *et seq.* Nothing contained in the Study alters that conclusion. As discussed below, the Study is not directly relevant to the issues pending before the Board, and is, at most, tangentially relevant to the instant proceeding, in that it involves spent fuel pools, albeit in a decommissioning status.<sup>2</sup>

The Study analyzes and discusses SFP accident risk at decommissioning plants, and states:

Prior to the staff’s preliminary risk assessment, the most extensive work on spent fuel pool risk was in support of Generic Issue (GI) 82, “Beyond Design Basis Accidents for Spent Fuel Pools,” [NUREG-1353]. This report assessed the SFP risk for operating reactors and concluded that a seismic event was the dominant initiating event for the loss of inventory.

While the staff drew from the GI 82 work in its assessment, it was concluded that because of the significant differences between operating and decommissioning plant spent fuel pool cooling systems, a complete assessment of SFP risk at decommissioning plants should be conducted, considering all potentially significant initiators, and reflecting the unique features found in a shutdown facility.

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<sup>2</sup> It should be noted that the Study has been issued as a draft, for comment.

Study at 10 (citations omitted). The Study did not take issue with the conclusions reached in NUREG-1353. It addressed NUREG-1353 and other studies, and found that they remain valid.

While the focus of this report is the risk associated with wet storage of spent fuel during decommissioning, the staff was alert to any implications on the storage of spent fuel during power operation. With regard to power operation, the resolution of Generic Issue (GI) 82, "Beyond Design Basis Accidents for Spent Fuel Pools," and other studies of operating reactor spent fuel pools concluded that existing requirements for operating reactor spent fuel pools are sufficient.

Study at 22-23.

Thus, the Study was limited to decommissioning plants<sup>3</sup> and did not change the conclusions in the reports dealing with SFPs at operating reactors. The findings and conclusions in those studies, including NUREG-1353, remain valid for spent fuel pool risk for operating plants. Moreover, the Study does not add anything to the issues already raised and argued in the prior pleadings of the parties.<sup>4</sup>

There is nothing in the Study that supports BCOC's assertion that its postulated scenario is probable, and is not remote and speculative for the Harris spent fuel pools. In fact, the Study does not address the postulated scenario because the Study does not address

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<sup>3</sup> The reason stated for undertaking the Study was to improve the regulatory framework applicable to decommissioning plants. *See* Study at 4.

<sup>4</sup> *See* "Orange County's Request for Admission of Late-Filed Contentions" (January 29, 2000); "Applicant's Response to BCOC's Late-Filed Environmental Contentions" (March 3, 2000); Staff Response; "Orange County's Reply to Applicant's and Staff's Oppositions to Request for Admission of Late-Filed Environmental Contentions" (March 13, 2000).

SFP accident risks at operating plants. The Study does demonstrate that the probability of a SFP accident at a decommissioning plant is very low. Study at 3, 16. *See also* Study at 18-19.

The Study, while dealing with SFPs at decommissioning plants, also demonstrates that BCOC's assertion that spent fuel that has decayed for as much as nine years is vulnerable to exothermic reactions is remote and speculative. The Staff determined that five years was the bounding age for susceptibility to exothermic reactions in SFPs at decommissioning plants for the sequences studied, and stated that site specific studies would be required to utilize lesser time periods. Study at A1-9. As the fuel ages, the susceptibility decreases, so that after five years the risk of a zirconium fire is remote. Study at 2. Nothing in the Study alters the fact that the event BCOC postulates has not been shown to be credible for the Harris SFPs.

The Study does not address the occurrence of BCOC's postulated event: degraded core accident with containment bypass or failure, causing inaccessibility to the SFP building, complete loss of SFP cooling for an extended period of time causing the SFP coolant to heat up to the boiling point and then boil down, again over an extended period of time<sup>5</sup> and finally, a self-perpetuating exothermic reaction in SFPs C and D. BCOC did not meet its burden to demonstrate that there is a credible basis for its postulated accident scenario and nothing in the Study suggests that the postulated scenario is anything but remote.

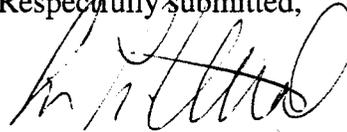
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<sup>5</sup> The Study noted that events leading to an exothermic reaction provide for a long response time. Study at 2 .

CONCLUSION

The findings and conclusions of the Study are limited to SFP accident risks at decommissioning plants and are not material to the issues before the Board. The technical findings which may have some relevancy to the instant matter do not provide support or basis for BCOC's late-filed contentions. There is no material information, not previously addressed in the prior studies or the pleadings previously submitted by the parties, that provides a basis for BCOC's proposed contentions. Thus, the Study is not directly relevant or material to the issues before the Board.

Respectfully submitted,



Susan L. Uttal  
Counsel for NRC staff

Dated at Rockville, Maryland  
this 29th day of March 2000.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF RESPONSE TO THE ATOMIC SAFETY AND LICENSING BOARD'S REQUEST FOR ADDITIONAL INFORMATION" in above-captioned proceeding have been served on the following through deposit in the NRC's internal mail system, or by deposit in the NRC's internal mail system, with copies by electronic mail, as indicated by an asterisk, or by deposit in U.S. Postal Service as indicated by double asterisk, with copies by electronic mail as indicated this 29<sup>TH</sup> day of March, 2000:

G. Paul Bollwerk, III, Chairman\*  
Administrative Judge  
Atomic Safety and Licensing Board  
Mail Stop: T 3F-23  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Frederick J. Shon\*  
Administrative Judge  
Atomic Safety and Licensing Board  
Mail Stop: T-3F-23  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Dr. Peter Lam\*  
Administrative Judge  
Atomic Safety and Licensing Board  
Mail Stop: T 3F-23  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Office of the Secretary\*  
ATTN: Rulemaking and Adjudications  
Staff  
Mail Stop: O 16-C-1  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Office of the Commission Appellate  
Adjudication  
Mail Stop: O 16-C-1  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Diane Curran, Esq.\*\*  
Harmon, Curran, Spielberg  
& Eisenberg, L.L. P.  
1726 M. Street, N.W., Suite 600  
Washington, DC 20025

Steven Carr\*\*  
Legal Department  
Carolina Power and Light Co.  
411 Fayetteville Street Mall  
P.O. Box 1551 - CPB 13A2  
Raleigh, North Carolina 27602

James M. Cutchin, V\*  
Mail Stop: T 3F-23  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

John H. O'Neill, Jr.\*\*  
William R. Hollaway\*\*  
Counsel for Licensee  
Shaw Pittman Potts & Trowbridge  
2300 "N" Street, N.W.  
Washington, DC 20037-1128

Atomic Safety and Licensing Board Panel  
U.S. Nuclear Regulatory Commission  
T-3F23  
Washington, DC 20555



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Susan L. Uttal  
Counsel for NRC Staff