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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

OFFICE OF THE
ADJUTANT GENERAL
STAFF

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

APPLICANT'S RESPONSE TO BOARD'S REQUEST REGARDING RELEVANCE OF STAFF'S DRAFT FINAL TECHNICAL STUDY OF SPENT FUEL POOL ACCIDENT RISK AT DECOMMISSIONING PLANTS

Pursuant to the Licensing Board's March 21, 2000 Memorandum and Order (Requesting Additional Information), Applicant Carolina Power & Light Company ("CP&L" or "Applicant") files this response providing its view on the relevance, if any, of the NRC Staff's February 15, 2000 "Draft Final Technical Study of Spent Fuel Pool Accident Risk at Decommissioning Plants" ("Decommissioning Study" or "Study") to the admissibility of the January 31, 2000 late-filed environmental contentions of the Board of Commissioners of Orange County ("BCOC"). Because the Decommissioning Study does not relate to the reactor driven accident scenario that BCOC proffers as the basis for its late-filed contentions, the Study is generally irrelevant to the issues before the Board.

The NRC Staff released its Decommissioning Study in draft final form for public comment on February 15, 2000.¹ Decommissioning Study, Cover Letter at 1. The

¹ The Decommissioning Study is a revised version of the preliminary draft study that was released for public review and comment last June, 1999. See Memorandum dated June 16, 1999 from G. Holahan

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availability of the Decommissioning Study for public comment was formally noticed in the Federal Register on February 22, 2000. 65 Fed. Reg. 8,752 (2000). On March 21, 2000, the Board requested the parties to this proceeding to provide their views on the relevance of the Decommissioning Study to the issues before the Board. Applicant addresses the Board's inquiry in terms of the issues currently before the Board, the admissibility of BCOC's four late-filed environmental contentions.²

The Decommissioning Study is not relevant to the admissibility of BCOC's late-filed environmental contentions because it does not address the accident scenario that forms the basis for BCOC's contentions. BCOC's accident scenario is "a 'degraded core' reactor accident" followed by "containment failure or bypass" followed by "extreme radiation doses precluding personnel access," which ultimately leads to loss of spent fuel pool water inventory. Orange County's Reply to Applicant's and Staff's Oppositions to Request for Admission of Late-Filed Environmental Contentions at 8 (March 13, 2000) ("BCOC's Reply to Applicant's and Staff's Responses). In contrast, the Decommissioning Study only addresses permanently shut down and defueled reactors,

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(NRC/NRR) to J. Zwolinski (NRC/NRR) re: Preliminary Draft Technical Study of Spent Fuel Pool Accidents for Decommissioning Plants; see also Decommissioning Study at 5.

² In addition, this Decommissioning Study has little bearing on the two technical contentions (Contentions TC-2 and TC-3) currently pending before the Board for decision pursuant to Subpart K of 10 C.F.R. Part 2. Nothing in the Study undermines or changes anything that Applicant has submitted to the Board in its Subpart K filing and oral argument concerning Contentions TC-2 and TC-3. The Study addresses neither 10 C.F.R. § 50.55a nor General Design Criterion 62. One potentially applicable point is the Study's conclusion that "qualitative risk insights demonstrate conclusively that SFP [Spent Fuel Pool] criticality poses no meaningful risk to the public," which further reinforces both Applicant's and Staff's position on the merits resolution of Contention TC-2. Decommissioning Study at 28 (emphasis added). While this provides further support for Applicant's and Staff's position on Contention TC-2, the Board already has sufficient information on the record to make a decision in the Applicant's favor on Contention TC-2, and need not rely on this further reinforcement of Applicant's position.

and therefore sheds no light on reactor accident-driven scenarios.³ The Study states that “the risks from a decommissioning plant are very different from an operating plant” after “fuel is permanently removed from the reactor vessel.” Decommissioning Study at 9. Therefore, while the Study does address the issue of hypothetical zirconium oxidation reactions, it explicitly does not include reactor accident-driven scenarios of the type put forward by BCOC as the basis for its contentions. Because the conclusions of the Decommissioning Study do not derive from BCOC’s operating reactor-driven accident scenario, it is not relevant to admissibility of the contentions, and for that reason the Study was not addressed in Applicant’s March 3, 2000 response to BCOC’s late-filed contentions. See Applicant’s Response to BCOC’s Late-Filed Environmental Contentions (“Applicant’s Response”). For the same reason, the Decommissioning Study need not be considered by this Board.

While not relevant to BCOC’s “degraded core” reactor accident scenario, the Decommissioning Study does make several points on other issues that further reinforce the Applicant’s position regarding rejection of BCOC’s late-filed environmental contentions. These points may be helpful to the Board in making its decision on admissibility of the late-filed contentions.

The Decommissioning Study concludes that many make-up sources are available, from both on-site and off-site sources, to provide make-up water to offset a loss of spent fuel pool water due to evaporation. In addition to a plant’s existing make-up systems, the Study notes that make-up water is available from other on-site systems, such as the plant’s firewater system (“firewater pumps”), as well as off-site systems, including “fire

³ The Decommissioning Study addresses accident risks “[a]fter a nuclear power plant permanently shuts down and the reactor is defueled.” 65 Fed. Reg. at 8,752.

engine[s],” “the local fire department,” or “use of a fire brigade.” Decommissioning Study at 12, 18-19. The Study notes that these additional on-site and off-site make-up sources, over and above the numerous pool make-up systems already available, can themselves provide the amount of water necessary to supplement “the small losses due to evaporation.” Id. at 12. While the make-up sources identified in the Study are generic, and not Harris-specific, they do demonstrate that, as a general matter, several redundant, alternative means are available to provide make-up water to spent fuel pools. Numerous Harris-specific make-up water sources are identified in Applicant’s March 3, 2000 response to BCOC’s late-filed contentions. Applicant’s Response at 12. As Applicant noted in its March 3, 2000 response, BCOC completely fails to address the numerous on-site and off-site make-up systems available at Harris to add water to the spent fuel pools, and therefore lacks the requisite basis with specificity for an admissible contention. See Applicant’s Response at 12-13. The Decommissioning Study further underscores BCOC’s failure to address the numerous on-site and off-site sources available to provide make-up water to the spent fuel pools to offset a loss of water due to evaporation, and further reinforces the lack of basis for BCOC’s alleged accident scenario at Harris.

Again consistent with Applicant’s position, the Decommissioning Study concludes that “a lot of time [is] available” to take the recovery actions necessary to offset a loss of pool water due to evaporation. Decommissioning Study at 18. Applicant’s Response points out that, even using BCOC’s analysis, about four months would be available at Harris to offset any loss of water due to evaporation. Applicant’s Response at 13-14. The Decommissioning Study also notes that the ability to take timely action is further aided by the many indications of loss of pool cooling that are available to operators, including “control room alarms and indicators, local temperature measurements, and eventually increasing area temperature and humidity and low pool

water level from boil-off.” Decommissioning Study at 18. BCOC has failed to provide a credible scenario wherein Harris operations would be unable to restore any of the numerous make-up water supply systems to the Harris spent fuel pools at any time during the four month period following a reactor accident.

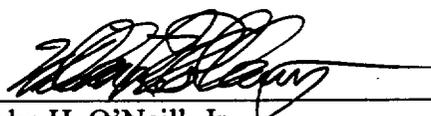
On the subject of sabotage and plant physical security, the Decommissioning Study reiterates the essential Commission conclusion that the accident risk from sabotage cannot be quantified. Decommissioning Study at 35. Applicant’s Response showed that BCOC’s sabotage contention must be rejected under governing Commission NEPA case law, which holds that “the risk of sabotage is simply not yet amenable to a degree of quantification that could be meaningfully used in the [NEPA] decisionmaking process.” Applicant’s Response at 19 (citing Philadelphia Electric Co. (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 701 (1985); Comm’n rev. denied, 23 NRC 125 (1986), aff’d Limerick Ecology Action v. NRC, 869 F.2d 719, 742 (3rd Cir. 1989)). On this same subject of sabotage risk, the Decommissioning Study also concludes that “PRA analyses in general, do not include events due to sabotage. No established method exists for estimating the likelihood of a sabotage event.” Decommissioning Study 35. Thus, the Study confirms the Commission’s position regarding analysis of sabotage risks, and confirms Applicant’s position that BCOC’s sabotage contention must be rejected.

Though it only addresses permanently shut down, defueled reactors, the Decommissioning Study demonstrates that the Staff is aware of the accident risks associated with a postulated zirconium fire in a spent fuel pool. The Staff’s continued analysis and understanding of these accident risks inform the Staff’s evaluation of hypothetical severe accidents, including “a zirconium cladding fire,” in the Environmental Assessment (“EA”) for the subject license amendment, and its subsequent

conclusion in the EA that “the potential for environmental impact from severe accidents is negligible.” 64 Fed. Reg. 71,514, 71,515 (1999). BCOC’s assertion that the Staff was unaware of “new information [that] has become available regarding the risks of storing spent fuel in pools” over the past 20 years is simply inconsistent with the Staff’s analysis in the Decommissioning Study. The Study demonstrates that the Staff was well informed of spent fuel pool accident risks, including a hypothetical “zirconium cladding fire” accident, when the Staff stated its EA conclusions regarding accident risks for the Harris license amendment application.

In summary, as a general matter the Decommissioning Study is not relevant to the “degraded core” reactor accident scenario postulated by BCOC and therefore provides no support for BCOC’s contentions. The Study does provide some further support for several of Applicant’s positions opposing admission of the contentions, but there is sufficient reason to reject all four of BCOC’s environmental contentions based on the parties’ filings to date, without any need for support from the Decommissioning Study.

Respectfully submitted,



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CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing "Applicant's Response to Board's Request Regarding Relevance of Staff's Draft Final Technical Study of Spent Fuel Pool Accident Risk at Decommissioning Plants" were served on the persons listed below by U.S. mail, first class, postage prepaid, and by electronic mail transmission, this 29th day of March, 2000.

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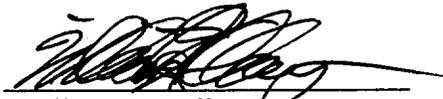
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