NUCLEAR REGULATORY COMMISSION

[Docket Nos. 52–025–COL and 52–026–COL; ASLB No.10–903–01–COL–BD02]

Southern Nuclear Operating Company Establishment of Atomic Safety And Licensing Board

Pursuant to delegation by the Commission dated December 29, 1972, published in the Federal Register, 37 FR 28,710 (1972), and the Commission’s regulations, see 10 CFR 2.104, 2.300, 2.303, 2.309, 2.311, 2.318, and 2.321, notice is hereby given that an Atomic Safety and Licensing Board (Board) is being established to proceed over the following proceeding:

Southern Nuclear Operating Company; (Vogtle Electric Generating Plant, Units 3 and 4)

This proceeding arises from the August 12, 2010 submission of a request for admission of a new contention to challenge the application of Southern Nuclear Operating Company’s application for a combined license for Nuclear Operating Company’s Vogtle Electric Generating Plant, Units 3 and 4, to be located in Burke County, Georgia. The request was submitted by the Blue Ridge Environmental Defense League, the Center for a Sustainable Coast, and Georgia Women’s Action for New Directions for Clean Energy.1

The Board is comprised of the following administrative judges: G. Paul Bollwerk, III, Chairman, Atomic Safety and Licensing Board Panel, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001.


All correspondence, documents, and other materials shall be filed in accordance with the NRC E-Filing rule. Pursuant to Title 10 of the Code of Federal Regulations (10 CFR), Section 50.12, “Specific exemptions,” APS has, by letter dated November 2, 2009, and supplemented by letter dated May 12, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML093160596 and ML101410262, respectively), requested a temporary exemption from 10 CFR 50.46, “Acceptance criteria for emergency core cooling systems for light-water nuclear power reactors,” and Appendix K to 10 CFR part 50, “ECCS Evaluation Models,” (Appendix K). The regulations in 10 CFR 50.46 contain acceptance criteria for the emergency core cooling system (ECCS) for reactors fueled with zircaloy or ZIRLO cladding. In addition, Appendix K to 10 CFR part 50 requires that the Baker-Just equation be used to predict the rates of energy release, hydrogen concentration, and cladding oxidation from the metal-water reaction. The temporary exemption request relates solely to the specific types of cladding material specified in these regulations. As written, the regulations presume the use of zircaloy or ZIRLO fuel rod cladding. Thus, an exemption from the requirements of 10 CFR 50.46 and Appendix K is needed to irradiate lead fuel assemblies (LFAs) comprised of different cladding alloys at PVNGS, Unit 3.

The temporary exemption requested by the licensee would allow up to eight LFAs manufactured by Westinghouse Electric Company LLC (Westinghouse) with fuel rods clad with Optimized ZIRLO™ to be inserted into the PVNGS, Unit 3, core during the fall 2010 refueling outage. The temporary exemption would allow the LFAs to be used for up to three operating cycles (Cycles 16, 17, and 18).

3.0 Discussion

Pursuant to 10 CFR 50.12, the Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of 10 CFR part 50 when (1) the exemptions are authorized by law, will not present an undue risk to public health or safety, and are consistent with the common defense and security; and (2) when special circumstances are present. Under 10 CFR 50.12(a)(2), special circumstances include, among other things, when application of the specific regulation in the particular circumstance would not serve, or is not necessary to achieve, the underlying purpose of the rule.

Authorized by Law

This exemption would allow up to eight LFAs with Optimized ZIRLO™ cladding to be inserted into the PVNGS, Unit 3 reactor core during the fall 2010 refueling outage. It would also allow the LFAs to be used for up to three operating cycles (Cycles 16, 17, and 18). The Optimized ZIRLO™ cladding is of a slightly different material composition than the zircaloy or ZIRLO cladding explicitly identified in 10 CFR 50.46, and implicitly assumed in 10 CFR part 50, Appendix K, for light water reactor fuel. However, the fundamental requirements regarding ECCS performance can still be satisfied by the LFAs with the Optimized ZIRLO™ cladding. As stated above, 10 CFR 50.12 allows the NRC to grant exemptions from the requirements of 10 CFR part 50. The NRC staff has determined that granting of the licensee’s proposed exemption will not result in a violation of the Atomic Energy Act of 1954, as amended, or the Commission’s regulations. Therefore, the exemption is authorized by law.

No Undue Risk to Public Health and Safety

The underlying purpose of 10 CFR 50.46 is to establish acceptance criteria for ECCS performance. Westinghouse topical reports WPAP–16500–P-A, Risk 0.0, “CE [Combined Engineering] 16x16 Next Generation Fuel Core Reference Report,” dated

---

1 On May 19, 2010, a Board that previously was established to adjudicate the contested portion of this proceeding granted summary disposition in favor of applicant, Southern Nuclear Operating Company, on the only admitted contention. Because that decision was not appealed to the Commission, and because the Commission did not take sua sponte review, the contested proceeding was terminated and the prior Board was divested of jurisdiction, thus necessitating the establishment of the current Board to consider the August 12, 2010 submission. See Commission Order (Aug. 25, 2010) at 1 (unpublished); Licensing Board Memorandum (Referring Request to Admit New Contention to the Commission) (Aug. 17, 2010) at 2–3 (unpublished).