

March 29, 2004

Mr. L. M. Stinson
Vice President
Southern Nuclear Operating Company
Post Office Box 1295
Birmingham, Alabama 35201

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE
JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2, LICENSE RENEWAL
APPLICATION

Dear Mr. Stinson:

By letter dated September 12, 2003, Southern Nuclear Operating Company, Inc. (SNC or the applicant) submitted an application pursuant to 10 CFR Part 54, to renew the operating licenses for Joseph M. Farley Nuclear Plant (FNP), Units 1 and 2, for review by the U.S. Nuclear Regulatory Commission (NRC). The NRC staff is reviewing the information contained in the license renewal application (LRA) and has identified, in the enclosure, areas where additional information is needed to complete the review. Specifically, the enclosed requests for additional information (RAIs) are from Section 2.5, Scoping and Screening Results: Electrical and Instrumentation Control Systems; Section 3.1, Aging Management of Reactor Vessel, Internals, and Reactor Coolant System; Section 3.5, Aging Management of Containments, Structures, and Component Supports; and Appendix B.5.8, NiCrFe Component Assessment Program.

These RAIs, in a draft format, have been provided to Mr. Jan Fridrichsen of your staff on March 5, 10, and 17, 2004. The NRC staff has discussed draft versions of these RAIs, via conference calls, to provide clarifications to the SNC staff on March 22 and 24, 2004. Your responses to these RAIs are requested within 30 days from the date of this letter. Mr. Fridrichsen has agreed to this request. If needed, the NRC staff is willing to meet or discuss with SNC again prior to the submittal of the applicant's responses to provide clarifications to the staff's RAIs.

If you have any questions, please contact me at 301-415-1315 or e-mail tyl1@nrc.gov.

Sincerely,

/RA/

Tilda Liu, Project Manager
License Renewal Section A
License Renewal and Environmental Impacts Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket Nos. 50-348 and 50-364

Enclosure: As stated

cc w/encl: See next page

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Sincerely,

/RA/

Tilda Liu, Project Manager
License Renewal Section A
License Renewal and Environmental Impacts Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket Nos. 50-348 and 50-364

Enclosure: As stated

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**JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2
LICENSE RENEWAL APPLICATION
REQUEST FOR ADDITIONAL INFORMATION (RAI)**

Section 2.5: Scoping and Screening Results: Electrical and Instrumentation and Control Systems

RAI 2.5-1

Interim Staff Guidance (ISG) -2, "NRC Staff Position on the License Renewal Rule (10 CFR 54.4) as it relates to the Station Blackout Rule (10 CFR 50.63)," states, in part, that "The offsite power systems consist of a transmission system (grid) component that provides a source of power and a plant system component that connects the power source to a plant's onsite electrical distribution system which power safety equipment. For the purpose of the license renewal rule, the staff has determined that the plant system portion of the offsite power system that is used to connect the plant to the offsite power source should be included within the scope of the rule." Provide a detail description of the FNP recovery path and discuss how the recovery path is in compliance with ISG-2. The discussion should also include restoration of power to each 4.16 kV safety bus. Clarify how startup transformers 2A, 1A, and 1B are fed from the offsite power source without using breakers 830, 820, and 800.

Section 3.1: Aging Management of Reactor Vessel, Internals, and Reactor Coolant System

RAI 3.1-4

Neither Tables 3.1.1 nor 3.1.2-3 list the cast austenitic stainless steel (CASS) pressurizer spray head assembly as being susceptible to cracking due to thermal fatigue or that a time-limited aging analysis (TLAA) exists to address aging management for this component. For this component and commodity group, (IVC.2.5.4) GALL recommends a TLAA to address cumulative fatigue damage. Provide further information as to whether this plant specific component is susceptible to the aging effect requiring management.

Section 3.5: Aging Management of Containments, Structures, and Component Supports

RAI 3.5-13

For American Society of Mechanical Engineers (ASME) Class 1, 2 and 3 piping and components support members, NUREG-1801, GALL Report, calls for ASME Section XI, Subsection IWF Program to manage aging effects due to loss of material, pitting and general corrosion of carbon steel support members, welds, bolted connections and support anchorages (refer to GALL Report III B1.1.1-a and III B1.2.1-a). However, in Table 3.5.2-9 (page 3.5-62) of the LRA, the applicant credited Structures Monitoring Program instead of the Inservice Inspection Program for managing aging of the same support members/elements. The applicant is requested to discuss the basis for taking such exceptions to the GALL Report.

Enclosure

RAI 3.5-14

For constant and variable load spring hangers, guides, stops, sliding surfaces and vibration isolators listed in Table 3.5.2-9 of the LRA, GALL Report calls for ASME Section XI, Subsection IWF for aging management of these components; whereas FNP opted to credit Structures Monitoring Program for managing aging of these components. Additionally, item 3.5.1-32 in Table 3.5.1 of the LRA states a position, under its discussion column, that FNP does not consider loss of mechanical function to be an aging effect requiring management based on the plant operating experience, contrary to that of GALL Report (refer to GALL Report Sections III B1.1.3-a, III B1.2.2-a and III B1.3.2-a). The applicant is requested to justify these deviations from the GALL Report.

Appendix B 5.8: NiCrFe Component Assessment Program

RAI B.5.8-1

Under Appendix A2.18 of the LRA, the applicant stated that it will implement the new NiCrFe Component Assessment Program (NCAP) prior to the period of extended operation. In its commitment, the applicant stated that the NiCrFe Component Assessment Program will be developed to address industry concerns regarding the potential for primary water stress corrosion cracking (PWSCC) in nickel alloy components exposed to the reactor coolant environment.

The applicant's commitment needs to reflect that the lessons learned from industry initiatives and research will become part of the NCAP. The applicant is requested to modify commitment A2.18 to state that the NCAP will be submitted with sufficient time prior to the period of extended operation in order for staff review and approval to determine if the program demonstrates the ability to manage the effects of aging in Alloy 600 components per 10 CFR 50.54.21(a)(3). Also add a commitment that interim report "PWR Materials Reliability Project Interim Alloy 600 Safety Assessment for US PWR Plants (MRP-44), Part 1: Alloy 82/182 Pipe Butt Welds," and/or its final version, will be used as part of the basis for the NCAP when the ranking of components' susceptibility to PWSCC is performed.

Joseph M. Farley Nuclear Plant

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