

December 12, 2003

Mr. J. B. Beasley, Jr.
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. Beasley:

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 U.S. Nuclear Regulatory Commission's (NRC). The NRC staff are reviewing the information contained in the license renewal application (LRA) and have 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 2.1, Scoping and Screening Methodology.

These RAIs are based on the staff's audit of the LRA methodology conducted at the SNC corporate office in Birmingham, Alabama during the week of November 17-21, 2003. The staff requests that the applicant provide additional information regarding the scoping and screening methodology and quality attributes for certain aging management programs. These issues require additional NRC staff review prior to closure.

These RAIs have been provided to Mr. Jan Fridrichsen of your staff in parts on December 8, 2003. Your responses to these RAIs are requested within 30 days from 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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License Renewal Section A
License Renewal and Environmental Impacts Program
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Accession No: ML033520279

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

Section 2.1: Scoping and Screening Methodology

RAI (2.1-1) 10 CFR 54.4(a)(2.) Scoping Criteria for Nonsafety-related SSCs

By letters dated December 3, 2001, and March 15, 2002, the Nuclear Regulatory Commission (NRC) issued a staff position to the Nuclear Energy Institute which described areas to be considered and options it expects licensees to use to determine what systems, structures, or components (SSCs) meet the 10 CFR 54.4(a)(2) criterion (i.e., All nonsafety-related (NSR) SSCs whose failure could prevent satisfactory accomplishment of any safety-related (SR) functions identified in paragraphs (a)(1)(i),(ii),(iii) of this section).

The December 3rd letter provided specific examples of operating experience which identified pipe failure events (summarized in NRC Information Notice 2001-09, "Main Feedwater System Degradation in Safety-Related ASME Code Class 2 Piping Inside the Containment of a Pressurized Water Reactor,") and the approaches that the NRC considers acceptable to determine which piping systems should be included in scope based on the 54.4(a)(2) criterion.

The March 15th letter further described the staff's expectations for the evaluation of non-piping SSCs to determine which additional NSR SSCs are within scope. The position states that applicants should not consider hypothetical failures, but rather should base their evaluation on the plant's current licensing basis, engineering judgement and analyses, and relevant operating experience. The letter further describes operating experience as all documented plant-specific and industry-wide experience which can be used to determine the plausibility of a failure. Operating experience documentation sources would include NRC generic communications and event reports, plant-specific condition reports, industry reports, and engineering evaluations.

Section 2.1.3.2, "NSR Criteria Pursuant To 10 CFR 54.4(a)(2)," of the license renewal application (LRA) discusses placing non-attached low energy NSR piping in-scope if it has a spatial relationship with SR SSCs such that if the pressure boundary of the piping failed, the liquid inside could cause the SR SSC to fail. The process established by the applicant for identifying non-attached NSR piping and mechanical components involved identifying valid targets and credible threats in a given area of the plant. For the purposes of this process, the applicant defined a valid target as an electrical SR SSC that supports a final function that is in the scope of license renewal for criterion 10 CFR 54.4(a)(1).

Farley Nuclear Plant, "License Renewal Position Evaluation and Disposition," dated November 18, 2003, discusses the scoping methodology for NSR equipment that could affect SR equipment in accordance with 10 CFR 54.4(a)(2). The position states, in part, that for purposes of determining a credible threat, the NSR mechanical component must be within 20 feet laterally or beneath, or any distance above, a SR electrical component and the threat must be liquid bearing (water or oil).

For NSR piping and components attached to SR piping, Section 2.1.3.2 states, in part, that these components be included in-scope of 10 CFR 54.4(a)(2) to the extent that these piping

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and components are necessary for the qualification (e.g. seismic loading) of the SR piping. Where a transition occurs from the SR in-scope piping to the NSR piping, the applicant considers the NSR components *up to* (emphasis added) the next equivalent seismic anchor (or physical restraint in the third-direction) to be in the scope of the Rule and evaluated for the effects of aging management.

Based on a review of Section 2.1.3.2 of the LRA, the applicant's scoping and screening implementation procedures and discussions with the applicant, the staff determined that additional information is required with respect to certain aspects of the applicant's evaluation of the 10 CFR 54.4(a)(2) criteria. Therefore, the staff requests that the applicant address the following:

- A. Describe the basis and/or justification for use of the 20 foot spatial interaction screening criteria.
- B. Consistent with the staff position described in the March 15th letter, please describe the scoping methodology implemented for the evaluation of the 54.4(a)(2) criteria as it relates to the non-fluid-filled (normally empty or gas bearing) SSCs of interest. As part of your response please indicate the non-fluid-filled SSCs evaluated and describe the site and industry operating experience relied on to determine the potential for failures of such non-fluid-filled SSCs which could impact safety-related SSCs within scope.
- C. Describe the basis and/or justification for limiting the valid target to only an electrical SR SSC.
- D. In discussions with the applicant during the audit, the team was informed that where NSR plant equipment was credited with providing anchorage for NSR piping that was attached to SR piping, the applicant considered the anchor itself within the scope of license renewal, which is contrary to the statement in Section 2.1.3.2 of the LRA. Please provide a written response which clarifies the position of including the anchor in the scope of license renewal.
- E. Describe the basis and/or justification for the policy regarding, "the next equivalent seismic anchor, or physical restraint in the third direction."
- F. Based on the audit team's review of associated plant and instrumentation drawings, scoping and screening reports, and discussions with the applicant LRA staff regarding the service water system, the audit team identified a portion of the NSR piping (3" HCC-321 attached to valve QV-791B) in the service water system which met the initial scoping criteria for attached NSR piping described in the LRA position paper "License Renewal Position Evaluation and Disposition," dated November 18, 2003, but had not been included within the scope of license renewal. Describe the basis for not including that portion of the NSR piping within scope, and, to the extent that a process implementation error had been made, perform an extent of condition review to ensure no other SSCs were omitted from scope as a result of this condition.

In addressing each of the above issues, if your review identifies any new SSCs that need to be brought into scope, list those SCs for which aging management reviews were conducted, and for each SC describe the aging management programs, as applicable, to be credited for managing the identified aging effects.

RAI (2.1-2) Quality Assurance Program Attributes in Appendix A, "Updated Safety Analysis Report (USAR) Supplement," and Appendix B, "Aging Management Activities"

The NRC staff reviewed the applicant's aging management programs described in Appendix A, "Final Safety Analysis Report (USAR) Supplement," and Appendix B, "Aging Management Activities," of the Joseph M. Farley license renewal application. The purpose of this review was to assure that the aging management activities were consistent with the staff's guidance described in NUREG-1800, Section A.2, "Quality Assurance for Aging Management Programs (Branch Technical Position IQMB-1)," regarding quality assurance attributes of aging management programs.

Based on the staff's evaluation, the quality attributes (corrective action, confirmation process, and administrative controls) described in Appendix B, Section B1.3, "Quality Assurance Program and Administrative Controls," of the LRA for all programs credited for managing aging effects were consistent with Branch Technical Position IQMB-1. However, the applicant has not sufficiently described the AMP quality attributes in Appendix A, "Final Safety Analysis Report Supplement." The staff requests that the applicant supplement the information provided in the Appendix A to include a description of the quality assurance program attributes, including references to pertinent implementing guidance as necessary, which are credited for the programs to manage aging effects described in Appendix A and Appendix B of the LRA. The description in Appendix A should provide sufficient information for the staff to determine if the quality attributes for the programs credited with managing aging effects are consistent with the review acceptance criteria contained in NUREG-1800, Section A.2, "Quality Assurance for Aging Management Programs (Branch Technical Position IQMB-1)."