

September 14, 2004

Mr. L. M. Stinson
Vice President - Farley Project
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). The staff has identified, in the enclosure, areas where additional information is needed to complete the review. Specifically, the enclosed request for additional information (RAI) is from the supplemental information on the aging management review results for the high head (charging pump) casings that SNC submitted via a letter dated August 31, 2004 (SNC Letter No. NL-04-1594).

This RAI, in a draft format, has been provided to Mr. Jan Fridrichsen of your staff on September 13, 2004. The NRC staff has discussed the draft version of this RAI, via a conference call, to provide clarifications to the SNC staff on September 14, 2004. If needed, the NRC staff is willing to meet or discuss with SNC again prior to the submittal of the applicant's response to provide further clarifications to the staff's RAI.

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

Sincerely,

/RA/

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

Supplemental Information on the Aging Management Review Results for the High Head (Charging Pump) Casings [from applicant's letter dated August 31, 2004]

RAI 3.2-8

FNP's six charging/high head safety injection pumps are susceptible to loss of material due to clad cracking and subsequent corrosion in the carbon steel base metal. The applicant stated that the pump casing inspections are existing periodic tasks that manage loss of material in the carbon steel base metal resulting from boric acid corrosion at locations of clad cracking. Inspections include periodic non-intrusive ultrasonic testing (UT) exams of accessible areas of the pump casings to detect through-clad cavities (loss of material) in the carbon steel base material. Visual testing (VT) examination of the internal surface of the pump casings is performed any time a rotating assembly is removed during pump maintenance. To further evaluate the aging management program for the pumps, the staff requests the applicant to provide the following information:

- a. The applicant stated that pump 2A casing received a VT-1 for clad cracking during inspection of the rotating assembly; however, it is not clear if the other five pumps received VT-1 inspections. Explain if VT-1 inspections for clad cracking have been performed (or are scheduled to be performed) for the 1A, 1B, 1C, 2B, and 2C pumps. Are all internal clad surfaces of the pump casing VT-1 inspected? Will VT-1 inspections be performed during the period of extended operation?
- b. The applicant stated that UT inspections will be performed to detect loss of material in the carbon steel base material of the pump casings. Since the loss of material is not limited to a specific location, describe the process used to ensure that the UT inspection methodology (including sample size) will detect the loss of material in the pump casings.
- c. NUREG-1800, Section A.1.2.3.1 recommends that the scope of the aging management program include the specific structures and components of which the program manages the aging. The applicant is requested to include the charging/high head safety injection pumps in the scope of the program for Periodic Surveillance and Preventive Maintenance Activities.
- d. NUREG-1800, Section A.1.2.3.5 recommends that monitoring and trending activities be described, and they should provide predictability of the extent of degradation and thus affect timely corrective actions. Plant-specific and/or industry operating experience may be considered in evaluating the appropriateness of the technique and frequency. The applicant is requested to describe the monitoring and trending process for the Periodic Surveillance and Preventive Maintenance Activities.
- e. NUREG-1800, Section A.1.2.3.6 recommends that acceptance criteria and its basis be described. The applicant is requested to describe the UT acceptance criteria and its basis for the Periodic Surveillance and Preventive Maintenance Activities.

Enclosure

f. NUREG-1800, Section A.1.2.3.10 recommends that the operating experience provide objective evidence to support the conclusion that the effects of aging will be managed adequately so that the intended function will be maintained during the period of extended operation. The applicant is requested to provide plant-specific and/or industry operating experience for corrosion of the pump casings to support the conclusion that the aging effects will be adequately managed by the Periodic Surveillance and Preventive Maintenance Activities.

Joseph M. Farley Nuclear Plant

cc:

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