

December 2, 2003

LICENSEE: Southern Nuclear Operating Company  
FACILITY: Joseph M. Farley Nuclear Plant, Units 1 and 2  
SUBJECT: SUMMARY OF CONFERENCE CALL BETWEEN THE NRC AND THE SOUTHERN NUCLEAR OPERATING COMPANY CONCERNING DRAFT REQUESTS FOR ADDITIONAL INFORMATION (D-RAIs) ON JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2, LICENSE RENEWAL APPLICATION (TAC NOS. MC0774 AND MC0775).

The U.S. Nuclear Regulatory Commission (NRC) staff and representatives of the Southern Nuclear Operating Company (SNC) participated in a conference call on October 27, 2003, to discuss the staff's questions on Section 4, "Time Limited Aging Analysis" (TLAA), of the Joseph M. Farley, Unit 1 and 2, license renewal application (LRA). On the basis of the discussion, the applicant was able to better understand the staff's questions. No staff decisions were made during the conference call. In some cases, the applicant agreed to provide information for clarification.

A summary of the questions discussed and the applicant's proposed actions are presented below:

D-RAI 4.2.1-1:

Section 4.2.1 states that vessel fluence to 54 effective full-power years (EFPYs) has been calculated in accordance with the guidance in RG 1.190, "Calculational and Dosimetry Methods for Determining Pressure Vessel Neutron Fluence." Please provide information (or a reference) which explains how the guidance in RG 1.90 was followed.

The SNC indicated that the question is clear. The applicant stated that it will submit its formal response to this question once the request of additional information (RAI) is issued by the staff for this item.

D-RAI 4.2.3-1:

The LRA lists the low-temperature overpressure protection (LTOP) TLAA being provided in Section 4.2.3 of the application. However, LRA Section 4.2.3 is TLAA on pressurized thermal shock. Is the LTOP TLAA actually provided in LRA Section 4.5.3?

The staff and the applicant discussed this issue. The applicant agreed to provide the information on its particular Cold Overpressure Mitigation Analysis as requested by the staff. The applicant also stated that it will provide Reference 20, SM-90-1706-001, Revision 6, "Evaluate RHR Relief Valve Flow," Southern Nuclear Operating Company, July 1998, that is listed in Section 4.6 of LRA under "References," in order to resolve this issue.

D-RAI 4.2.5-1

For Section 4.2.5, have the pressure-temperature limits report (PTLR) references been updated to include fluence methods in agreement with the guidance in RG 1.190?

The staff and the applicant discussed whether the PTLR references are updated. Based on the discussion, the applicant agreed to provide a copy of the PTLR references, including those referenced in GL 96-03, "Relocation of the pressure temperature limits curves and low temperatures overpressure protection system limits," dated January 31, 1996.

A copy of the e-mail containing the staff's questions or D-RAIs that was sent to the applicant is provided in the Enclosure 1. A list of the participants in the conference call is provided in Enclosure 2. The SNC has had an opportunity to review and comment on this summary.

*/RA/*

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

Docket Nos: 50-348 and 50-364

Enclosures: As stated

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D-RAI 4.2.5-1

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Accession No. ML033390305

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**From:** Tilda Liu  
**To:** Jan Fridrichsen  
**Date:** 10/22/03 7:30PM  
**Subject:** Questions on Farley LRA Section 4 TLAA's

Jan,

Following are the questions that we currently have. If you would take sometime to review these and we can discuss this on the phone with DE reviewers (Jim Medoff and Lambro Lois) either Monday or Tuesday of next week. Just let me know.

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Questions/Comments on Section 4, TLAA's (Medoff)

Item 1:

The Farley LR applicant includes five subsections to the TLAA on neutron irradiation embrittlement (LRA Section 4.2):

4.2.1 - Neutron Fluence

4.2.2 - Upper Shelf Energy

4.2.3 - Pressurized Thermal Shock

4.2.4 - Adjusted Reference Temperature Calculations

4.2.5 - Pressure Temperature Limits

Section 4.2.4 discusses the applicant's calculation of the adjusted reference temperatures (RTndt) values for the 1/4 thickness (1/4T) locations of the Farley reactor vessels. These 1/4T RTndt values are used as inputs to the calculations of the pressure-temperature (P-T) limit values for the vessel, which the applicant discusses in Section 4.2.5 of the application.

However, the RTndt value calculations for the 3/4 thickness locations of the vessels are also used in the calculation of P-T limits for the vessels - which the applicant has failed to address in section 4.2.4 of the LRA. Usually the calculations of the RTndt values for the 1/4T and 3/4T locations are treated as a subset of the TLAA for the P-T limits and, up to now, have not yet been included as a separate TLAA subsection to the neutron embrittlement TLAA (4.2). Why is the calculation of the RTndt values for the 3/4 thickness locations of the vessels not included?

Item 2:

Application lists LTOP TLAA being provided in Section 4.2.3 of the application. However, LRA 4.2.3 is TLAA on pressurized thermal shock. Is the LTOP TLAA actually provided in 4.5.3 or where is it?

Item 3:

The LRA does not contain sufficient information for the review of Section 4.3.2, RCP flywheel. (We will talk more about this in the call)

Item 4

Section 4.2.1, states that vessel fluence to 54 EFPYs has been calculated in accordance with the guidance in RG 1.190. Please provide information (or a reference) which explains how the guidance in RG 1.190 was followed.

Item 5

Section 4.2.5. Have the PTLR references been updated to include fluence methods in agreement with the guidance in RG 1.190?

ENCLOSURE 1

**LIST OF PARTICIPANTS FOR CONFERENCE CALL ON  
DRAFT REQUESTS FOR ADDITIONAL INFORMATION (D-RAIs)**

October 27, 2003

**Participants**

**Affiliation**

|                       |     |
|-----------------------|-----|
| Tilda Liu             | NRC |
| Zahira Cruz           | NRC |
| Lambros Lois          | NRC |
| Jan E. Fridrichsen    | SNC |
| Jon E. Hornbuckle     | SNC |
| William P. Evans      | SNC |
| Michael A. Macfarlane | SNC |
| Charles R. Pierce     | SNC |

ENCLOSURE 2