

April 22, 2004

LICENSEE: Southern Nuclear Operating Company  
FACILITY: Joseph M. Farley Nuclear Plant, Units 1 and 2  
SUBJECT: SUMMARY OF TELEPHONE CONFERENCES ON APRIL 7, 8, AND 12, 2004,  
BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION AND THE  
SOUTHERN NUCLEAR OPERATING COMPANY CONCERNING DRAFT  
REQUESTS FOR ADDITIONAL INFORMATION ON JOSEPH M. FARLEY  
NUCLEAR PLANT, UNITS 1 AND 2, LICENSE RENEWAL APPLICATION  
(TAC NOS. MC0774 AND MC0775)

The U.S. Nuclear Regulatory Commission staff and representatives of Southern Nuclear Operating Company (SNC or the applicant) held telephone conferences on April 7, 8, and 12, 2004, to discuss draft requests for additional information (D-RAIs) concerning the Joseph M. Farley Nuclear Plant (FNP) license renewal application.

The conference calls were useful in clarifying the intent of the staff's questions. On the basis of the discussion, the applicant was able to better understand the staff's questions. No staff decisions were made during the telephone conferences. In some cases, the applicant agreed to provide information for clarification.

Enclosure 1 provides a list of the telephone conference participants. Enclosure 2 contains a listing of the RAIs, D-RAIs, questions discussed with the applicant, including a brief description on the status of the items. The applicant has had an opportunity to review and comment on this summary.

*/RA/*

Tilda Y. 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

Enclosures: As stated

cc w/enclosures: See next page

April 22, 2004

LICENSEE: Southern Nuclear Operating Company

FACILITY: Joseph M. Farley Nuclear Plant, Units 1 and 2

SUBJECT: SUMMARY OF TELEPHONE CONFERENCES ON APRIL 7, 8, AND 12, 2004, BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION AND THE SOUTHERN NUCLEAR OPERATING COMPANY CONCERNING DRAFT REQUESTS FOR ADDITIONAL INFORMATION ON JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2, LICENSE RENEWAL APPLICATION (TAC NOS. MC0774 AND MC0775)

The U.S. Nuclear Regulatory Commission staff and representatives of Southern Nuclear Operating Company (SNC or the applicant) held telephone conferences on April 7, 8, and 12, 2004, to discuss draft requests for additional information (D-RAIs) concerning the Joseph M. Farley Nuclear Plant (FNP) license renewal application.

The conference calls were useful in clarifying the intent of the staff's questions. On the basis of the discussion, the applicant was able to better understand the staff's questions. No staff decisions were made during the telephone conferences. In some cases, the applicant agreed to provide information for clarification.

Enclosure 1 provides a list of the telephone conference participants. Enclosure 2 contains a listing of the RAIs, D-RAIs, questions discussed with the applicant, including a brief description on the status of the items. The applicant has had an opportunity to review and comment on this summary.

*/RA/*

Tilda Y. 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

Enclosures: As stated

cc w/enclosures: See next page

DISTRIBUTION: See next page

Accession No: ML041170401

Document Name:C:\ORPCheckout\FileNET\ML041170401.wpd

OFFICE	LA:RLEP	CO-OP:RLEP	PM:RLEP	SC:RLEP
NAME	YEdmonds	D. Chen	T. Liu	S. Lee
DATE	4/21/04	4/22/04	4/22/04	4/22/04

OFFICIAL RECORD COPY

**HARD COPY**

RLEP RF  
T. Liu (PM)  
D. Chen  
D. Jeng  
J. Medoff  
J. Strnisha

**E-MAIL:**

PUBLIC  
D. Matthews  
F. Gillespie  
C. Grimes  
RidsNrrDe  
E. Imbro  
G. Bagchi  
K. Manoly  
W. Bateman  
J. Calvo  
R. Jenkins  
P. Shemanski  
J. Fair  
S. Black  
B. Boger  
D. Thatcher  
R. Pettis  
G. Galletti  
C. Li  
M. Itzkowitz  
R. Weisman  
M. Mayfield  
A. Murphy  
S. Smith (srs3)  
S. Duraiswamy  
Y. L. (Renee) Li  
RLEP Staff

-----  
C. Julian (R-II)  
C. Patterson (R-II)  
R. Fanner (R-II)  
S. Peters  
R. Hoefling (OGC)  
OPA  
B. Jain  
L. Whitney

**LIST OF PARTICIPANTS FOR TELEPHONE CONFERENCES ON  
DRAFT REQUESTS FOR ADDITIONAL INFORMATION**

**APRIL 7-12, 2004**

**April 7, 2004**

**Participants**

Tilda Liu  
David Jeng  
Jim Strnisha  
Rich Morante  
Jan Fridrichsen  
Mike Macfarlane  
Bill Evans  
Partha Ghosal

**Affiliation**

U.S. Nuclear Regulatory Commission (NRC)  
NRC  
NRC  
Brookhaven National Laboratory (BNL)  
Southern Nuclear Operating Company (SNC)  
SNC  
SNC  
SNC

**April 8, 2004**

**Participants**

Tilda Liu  
David Jeng  
Rich Morante  
Jan Fridrichsen  
Mike Macfarlane  
Chuck Pierce

**Affiliation**

NRC  
NRC  
BNL  
SNC  
SNC  
SNC

**April 12, 2004**

**Participants**

Tilda Liu  
David Chen  
Jim Medoff  
Jan Fridrichsen  
Mike Macfarlane  
Wayne Lunceford  
Bill Evans  
Jon Hornbuckle

**Affiliation**

NRC  
NRC  
NRC  
SNC  
SNC  
SNC  
SNC  
SNC

## REVIEW OF LICENSE RENEWAL APPLICATION (LRA) FOR FARLEY UNITS 1 AND 2 REQUESTS FOR ADDITIONAL INFORMATION (RAI)

April 7, 2004

### **Section 2.4: Scoping and Screening Results: Containments, Structures, and Component Supports**

#### D-RAI 2.4-8

The staff requires additional information concerning the possibility that thermal insulation may serve an intended function, in accordance with Title 10 of the *Code of the Federal Regulations* Part 54.21(a)(2)(10 CFR 54.21(a)(2)), to control the maximum temperature of safety-related structures and structural components that meet 10 CFR 54.21(a)(1). Possible examples are (1) maintaining the maximum temperature of steel and/or concrete elements of nuclear steam supply system (NSSS) supports below the levels assumed in the design basis of the supports; and (2) maintaining the maximum temperature of structural concrete below the threshold levels of 150°F for general areas and 200°F for local areas around hot penetrations.

Thermal insulation is typically passive and long-lived. If it also serves an intended function, then it meets the criteria for inclusion within the scope of license renewal, in accordance with 10 CFR 54.21(a)(2). Consequently, the applicant is requested to (1) identify any thermal insulation at FNP, Units 1 and 2, that serves an intended function in accordance with 10 CFR 54.21(a)(2); (2) describe plant-specific operating experience related to degradation of (a) thermal insulation in general, and (b) thermal insulation that serves an intended function in accordance with 10 CFR 54.21(a)(2); (3) describe the scoping and screening evaluation for thermal insulation that serves an intended function in accordance with 10 CFR 54.21(a)(2), including the technical basis for either inclusion within or exclusion from the scope of license renewal; (4) describe the aging management review for thermal insulation that serves an intended function in accordance with 10 CFR 54.21(a)(2); and (5) identify and describe the program credited to manage aging of thermal insulation that serves an intended function in accordance with 10 CFR 54.21(a)(2) during the period of extended operation.

**Discussion:** The applicant indicated that the question was clear, but it requested clarification on the basis of this question. The staff indicated that another discussion will be held to clarify the staff's position shortly.

### **Section 3.2: Aging Management of Engineered Safety Features Systems**

### **Section 3.3: Aging Management of Auxiliary Systems**

### **Section 3.4: Aging Management of Steam and Power Conversion Systems**

#### D-RAI 3.2-7

(This D-RAI is related to engineered safety features, auxiliary systems, and/or steam and power conversion systems)

The Bolting Integrity program in section XI-M18 of NUREG-1801 addresses the aging effects cracking and loss of preload (stress relaxation) for closure bolting. Cracking is considered an aging effect requiring management (AERM) for high strength bolts where the actual yield

strength of the material is equal or greater than 150 ksi and stress relaxation is considered an AERM for bolts in high temperature applications. LRA system Tables 3.2.2-X, 3.3.2-X, and 3.4.2-X do not address cracking or stress relaxation for these conditions. The applicant is requested to discuss if any bolting in the engineered safety features, auxiliary systems, or steam and power conversion systems meet these conditions and provide appropriate aging management.

**Discussion:** The applicant indicated that the question was clear. This D-RAI will be sent as a formal RAI.

## REVIEW OF LICENSE RENEWAL APPLICATION (LRA) FOR FARLEY UNITS 1 AND 2 REQUESTS FOR ADDITIONAL INFORMATION (RAI)

April 8, 2004

### D-RAI 2.4-8

The staff requires additional information concerning the possibility that thermal insulation may serve an intended function, in accordance with Title 10 of the *Code of the Federal Regulations* Part 54.21(a)(2)(10 CFR 54.21(a)(2)), to control the maximum temperature of safety-related structures and structural components that meet 10 CFR 54.21(a)(1). Possible examples are (1) maintaining the maximum temperature of steel and/or concrete elements of nuclear steam supply system (NSSS) supports below the levels assumed in the design basis of the supports; and (2) maintaining the maximum temperature of structural concrete below the threshold levels of 150°F for general areas and 200°F for local areas around hot penetrations.

Thermal insulation is typically passive and long-lived. If it also serves an intended function, then it meets the criteria for inclusion within the scope of license renewal, in accordance with 10 CFR 54.21(a)(2). Consequently, the applicant is requested to (1) identify any thermal insulation at FNP, Units 1 and 2, that serves an intended function in accordance with 10 CFR 54.21(a)(2), (2) describe plant-specific operating experience related to degradation of (a) thermal insulation in general, and (b) thermal insulation that serves an intended function in accordance with 10 CFR 54.21(a)(2), (3) describe the scoping and screening evaluation for thermal insulation that serves an intended function in accordance with 10 CFR 54.21(a)(2), including the technical basis for either inclusion within or exclusion from the scope of license renewal, (4) describe the aging management review for thermal insulation that serves an intended function in accordance with 10 CFR 54.21(a)(2) and (5) identify and describe the program credited to manage aging of thermal insulation that serves an intended function in accordance with 10 CFR 54.21(a)(2) during the period of extended operation.

**Discussion:** The applicant and staff discussed this question again based on the conclusion reached during the conference call held on April 7, 2004. The staff noted that the correct citation is 10 CFR 54.4 (a)(2), and not 10 CFR 54.21(a)(2). The applicant agreed to the staff's proposal in revising this D-RAI as follows. This D-RAI will be sent as a formal RAI.

### D-RAI 2.4-8

The staff requires additional information concerning the possibility that thermal insulation may serve an intended function, in accordance with 10 CFR 54.4(a)(2), to control the maximum temperature of safety-related structures and structural components that meet 10 CFR 54.21(a)(1). Possible examples are maintaining the maximum temperature of steel and/or concrete elements of NSSS supports below the levels assumed in the design basis of the supports; and maintaining the maximum temperature of structural concrete below the threshold levels of 150°F for general areas and 200°F for local areas around hot penetrations.

Thermal insulation is typically passive and long-lived. If it also serves an intended function, then it meets the criteria for inclusion within the scope of license renewal, in accordance with 10 CFR 54.4(a)(2). Consequently, the applicant is requested to (1) identify any thermal insulation at FNP, Units 1 and 2, that serves an intended function in

accordance with 10 CFR 54.4(a)(2); (2) describe plant-specific operating experience related to degradation of a) thermal insulation in general, and b) thermal insulation that serves an intended function in accordance with 10 CFR 54.4(a)(2); and (3) describe the scoping and screening evaluation for thermal insulation that serves an intended function in accordance with 10 CFR 54.4(a)(2), including the technical basis for either inclusion within or exclusion from the scope of license renewal.

## REVIEW OF LICENSE RENEWAL APPLICATION (LRA) FOR FARLEY UNITS 1 AND 2 REQUESTS FOR ADDITIONAL INFORMATION (RAI)

April 12, 2004

### Section B.3.4: Reactor Vessel Surveillance Program

#### D-RAI B.3.4-1

In the [Operating Experience] program attribute for the Reactor Vessel Surveillance Program (RVSP), Southern Nuclear Operating Company (SNC) states that it may use other industry surveillance data (i.e., supplemental or external surveillance data) that are relevant to the neutron irradiation embrittlement assessments (i.e., pressurize thermal shock (PTS), upper-shelf energy (USE), adjusted reference temperature, and P-T limit assessments) for FNP, Units 1 and 2. In Generic Letter 92-01, Revision 1, Supplement 1, "Reactor Vessel Structural Integrity," the staff recommended that United States (U.S.) licensees owning light-water power reactors apply all reactor vessel (RV) surveillance data deemed relevant to the neutron irradiation embrittlement assessments for their facilities' RV materials. In Section 2.3 of NRC NUREG-1511, Supplement 2, "Reactor Vessel Integrity Status Report," the staff provided its recommendations on how to apply supplemental, external surveillance data to the neutron irradiation embrittlement assessments for any given RV at a U.S. nuclear power plant.

If SNC is going to apply supplemental, external surveillance data to the neutron irradiation embrittlement assessments for FNP, Units 1 and 2, the staff requests that SNC provide additional clarification on how the supplemental surveillance data will be applied to the assessments and justification as to why the supplemental surveillance data are considered to be valid for incorporation into these assessments. Specifically, clarify whether or not the use of supplemental surveillance data will conform to the NRC's recommendations in GL 92-01, Revision 1, Supplement 1, and with the recommended guidelines in Section 2.3 of NUREG-1511, Supplement 2. Address which heat of material in the FNP, Units 1 and 2, RVs will be addressed by the supplemental data and clarify whether or not the use of the supplemental surveillance data will be implemented on a one-to-one equivalent basis with a corresponding heat of material in the RV. In addition, clarify whether the supplemental surveillance data will be adjusted to account for any variances in the irradiation temperatures for the FNP, Units 1 and 2, RVs and those for the external RVs (units other than FNP) from which the data has been taken. If supplemental surveillance data is to be used, clarify how the data will impact the results of the neutron irradiation embrittlement assessments that are evaluated in Section 4.2 of the LRA.

**Discussion:** The applicant indicated that the question was clear. This D-RAI will be sent as a formal RAI.

#### D-RAI B.3.4-2

In the conclusion for the Reactor Vessel Surveillance Program (RVSP), as given in Section B.3.4.15 of LRA AMP B.3.4, SNC creates some ambiguity as to what types of exceptions from 10 CFR Part 50, Appendix H, that the applicant is referring to. Title 10 of the *Code of the Federal Regulations* Part 50.60(a) (10 CFR 50.60(a)) requires licensees of operating U.S. light-water reactors to implement the fracture toughness requirements of 10 CFR Part 50,

Appendix G, and the RVSP requirements of 10 CFR Part 50, Appendix H. 10 CFR 50.60(b) permits licensees to use proposed alternatives to the requirements in these appendices if an exemption is requested and granted by the Commission under the exemption provisions of 10 CFR 50.12. The staff does not have an issue with the conclusion section for the RVSP if the exceptions the applicant is referring to are exemptions that have been requested under the provisions of 10 CFR 50.60(b) and granted by the staff under 10 CFR 50.12. However, if SNC is referring to any deviation from the pertinent requirements of 10 CFR Part 50, Appendix H, that has been identified as an exception to GALL AMP XI.M31, 10 CFR 50.60(b) requires that the exception be submitted as an exemption request for staff review and approval. The staff therefore requests confirmation that SNC will modify the conclusion section for the RVSP (LRA AMP B.3.4) to state that "The RVSP will be implemented and maintained in accordance with the requirements of 10 CFR Part 50, Appendix H, unless alternatives to the requirements of the rule have been requested and granted under the exemption provisions of 10 CFR 50.60(b) and 10 CFR 50.12," or else withdraw the statement "with NRC-approved exceptions" from the conclusion section for the AMP.

**Discussion:** The applicant indicated that the question was clear. This D-RAI will be sent as a formal RAI.

Joseph M. Farley Nuclear Plant

cc:

Mr. Don E. Grissette  
General Manager - Plant Farley  
Southern Nuclear Operating Company  
Post Office Box 470  
Ashford, AL 36312

Mr. B. D. McKinney  
Licensing Manager  
Southern Nuclear Operating Company  
40 Inverness Center Parkway  
Post Office Box 1295  
Birmingham, AL 35201-1295

Mr. Stanford M. Blanton, esq.  
Balch and Bingham Law Firm  
Post Office Box 306  
1710 Sixth Avenue North  
Birmingham, AL 35201

Mr. J. B. Beasley, Jr.  
Executive Vice President  
Southern Nuclear Operating Company  
40 Inverness Center Parkway  
Post Office Box 1295  
Birmingham, AL 35201

Dr. D. E. Williamson  
State Health Officer  
Alabama Department of Public Health  
The RSA Tower  
201 Monroe Street, Suite 1500  
Montgomery, AL 36130-1701

Chairman  
Houston County Commission  
Post Office Box 6406  
Dothan, AL 36302

Mr. William D. Oldfield  
SAER Supervisor  
Southern Nuclear Operating Company  
Post Office Box 470  
Ashford, AL 36312

Mr. Charles R. Pierce  
Manager - License Renewal  
Southern Nuclear Operating Company  
40 Inverness Center Parkway  
Post Office Box 1295  
Birmingham, AL 35201

Mr. Fred Emerson  
Nuclear Energy Institute  
1776 I Street, NW, Suite 400  
Washington, DC 20006-3708

Resident Inspector  
U.S. Nuclear Regulatory Commission  
7388 N. State Highway 95  
Columbia, AL 36319

Mr. L. M. Stinson, Jr.  
Vice President - Farley Project  
Southern Nuclear Operating Company  
40 Inverness Center Parkway  
Post Office Box 1295  
Birmingham, AL 35201