



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

January 9, 2012

Mr. M. J. Ajluni
Nuclear Licensing Director
Southern Nuclear Operating Company, Inc.
40 Inverness Center Parkway
Post Office Box 1295, Bin - 038
Birmingham, AL 35201-1295

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT, UNIT NO. 2 - REQUEST FOR
ADDITIONAL INFORMATION (RAI), HNP-ISI-RR-12, RESIDUAL HEAT
REMOVAL SERVICE WATER PIPING (TAC NO. ME7726)

Dear Mr. Ajluni:

By letter dated December 22, 2011 (Agencywide Documents Access and Management System Accession No. ML113570234), Southern Nuclear Operating Company, Inc., submitted relief request for the HNP-ISI-RR-12, Version 1 for Edwin I. Hatch Nuclear Plant Unit No. 2. The proposed relief request will be applicable to wall thinning in the Residual Heat Removal Service Water piping using American Society of Mechanical Engineers (ASME) Code Case N-597-2.

Responses to the enclosed RAI are needed for us to continue our review. Please provide a response within thirty (30) calendar days of the date of this letter.

Sincerely,

A handwritten signature in black ink that reads "Patrick G. Boyle".

Patrick G. Boyle, Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-366

Enclosure:
RAI

cc w/encl: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION

RELIEF REQUEST (RR) HNP-ISI-RR-12, VERSION 1

RESIDUAL HEAT REMOVAL SERVICE WATER PIPING

EDWIN I. HATCH NUCLEAR PLANT, UNIT NO. 2

DOCKET NO. 50-366

TAC NO. ME7726

By letter dated December 22, 2011 (Agencywide Documents Access And Management System (ADAMS) Accession Number ML113570234), Southern Nuclear Operating Company, Inc. (SNC, the licensee) requested Nuclear Regulatory Commission (NRC) review and approval of RR HNP-ISI-RR-12, Version 1, for Edwin I. Hatch Nuclear Plant Unit 2. The proposed relief request will be applicable to wall thinning in the Residual Heat Removal Service Water (RHRSW) piping using American Society of Mechanical Engineers (ASME) Code Case N-597-2. To complete its review, the NRC staff requests the following additional information:

1. Clarify from which subarticles in the ASME Code Section XI the relief is requested. Discuss whether the RR will deviate from Code Case N-597-2, excluding the deviations from the five NRC Conditions imposed in Regulatory Guide 1.147, Revision 16, which are discussed in the proposed RR. If yes, list the deviation(s) and provide justification.
2. As shown on page E1-3 of the RR, in response to NRC Condition 1, the licensee stated that "...[t]he EPRI Report 202L-R2 is not applicable in this case because RHRSW has oxygen content significantly higher than FAC [flow-accelerated corrosion] components. Similar to the FAC program at the SNC plants, SNC has implemented a Fleet Service Water Program which includes the development of inspection requirements, determining the rate of wall thickness loss plus the calculation of values for the predicted remaining life..." (1) Discuss how the inspection requirements, the rate of wall thickness loss, the value of the predicted remaining wall thickness and the predicted remaining life for the pipe are determined in the SNC Fleet Service Water Program and discuss how these methods differ from the EPRI Report 202L-R2. (2) Page E1-5 of the relief request states that analytical evaluations will be performed based on each set of UT thickness measurements using ASME Code Case N-597-2. However, the above quoted statement states that the Fleet Service Water Program provides analytical evaluations and will be used. Clarify whether the analytical evaluations to project (predict) wall thinning in the subject piping will be based on N-597-2 or the Fleet Service Water Program. If the analytical method in the Fleet Service Water Program will be used, discuss whether the analytical evaluation method in the Fleet Service Water Program is consistent with the analytical evaluation requirements of Code Case N-597-2. If not, justify why the analytical method in the Fleet Service Water Program is acceptable for use.
3. (1) Discuss whether the RHR Service Water piping in the proposed relief request is located above ground or buried. If some portion of the pipe is buried underground, discuss how the buried portion of the pipe will be inspected. (2) Page E1-1 of the relief request states that the supply header can be cross-connected to heat exchanger 2E11B001B. Discuss the exact piping boundary (from end to end) that is covered under the proposed relief request and provide

Enclosure

an isometric drawing showing the affected piping. (3) Confirm that the entire length of the pipe is accessible for ultrasonic examinations of pipe wall thickness. If not, discuss how the pipe wall thickness can be determined for the inaccessible portion of the pipe. (4) Discuss the pressures and temperatures that the subject piping system will be exposed to for various design conditions.

4. On page E1-4 of the relief request, in response to NRC Condition 5, the licensee mentioned a generic calculated acceptable minimum wall thickness of 0.311 inches. The licensee also discussed a detailed evaluation per ASME Code Case N-597-2 that resulted in a calculated minimum wall of 0.183 inches. Submit both calculations and discuss the differences in wall thickness calculation that resulted in two significant different allowable wall thickness values.

5. Page E1-5 (top of the page) of the relief request states that "...[a] permanent Code-compliant repair will be performed during the next refueling outage currently scheduled to begin in February 2013 or during a system outage of sufficient length to effect repairs..." Page E1-5, Alternative Duration Section, states that "... [t]his relief request will remain in effect until an ASME Section XI Code repair/replacement is performed prior to reaching the allowable minimum wall thickness based on the ongoing ultrasonic thickness measurements..." These statements appear to provide different criterion for the ASME Code repair. The first statement states that the Code repair will be performed in the next refueling outage whereas the second statement states that the subject pipe will be repaired prior to reaching the allowable minimum wall thickness. (1) Discuss which statement above represents the intent of the relief request (i.e., when will the Code repair be performed). (2) Discuss the criterion by which the immediate ASME Code repair of the subject piping will be performed.

6. (1) Discuss whether the subject piping system is insulated. If insulated, discuss how leakage would be timely observed before the functionality and structural integrity of the piping is challenged. (2) Discuss whether periodic walkdowns will be performed in addition to the 30-day UT examinations. If not, discuss how leakage can be timely detected to minimize the potential of a pipe rupture.

7. Page E1-5 of the relief request states that "...[t]he affected area will be ultrasonically examined on a 30-day frequency until SNC establishes a wear rate... Analytical evaluation will be performed based on each set of UT [ultrasonic testing] thickness measurements using ASME Code Case N-597-2 as discussed in this relief request..." (1) Confirm that the 30-day UT examinations and analytical evaluations will be continuously performed until the pipe is ASME Code-repaired. (2) Discuss the administrative controls and measures if the wall thinning rate increases. (3) Page E1-5 states that the degradation mechanism is indeterminate and that additional areas of the subject piping were examined and no locations found below minimum wall thickness. Discuss how many areas have been examined for wall thinning (pipe segments other than the areas shown in Enclosure 2 of the relief request), which minimum wall was used for acceptance (0.311 inches generic or 0.183 inches per N-597-2 evaluation) and would the total number of examined areas provide a reasonable assurance that the RHR Service Water system piping is structurally sound (i.e., the extent of condition). (4) Discuss whether the 30-day UT examinations will include inspection of areas other than the affected area of the subject piping. If not, provide justification.

January 9, 2012

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/RA/

Patrick G. Boyle, Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-366

Enclosure:
RAI

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*via e-mail ML113640210

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|--------|---------------|---------------|-------------|-----------------------------|---------------|
| NAME | PBoyle | SFigueroa | TLupold * | GKulesa (VSreenivas for) | PBoyle |
| DATE | 01/5/12 | 01/5/12 | 12/31/11 | 01/6/12 | 01/9/12 |

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