



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

January 11, 2016

Mr. C. R. Pierce
Regulatory Affairs Director
Southern Nuclear Operating Company, Inc.
P. O. Box 1295/Bin - 038
Birmingham, AL 35201-1295

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2 – REQUEST FOR
ADDITIONAL INFORMATION (TAC NOS. MF6063 AND MF6064)

Dear Mr. Pierce:

By letter dated April 2, 2015, as supplemented by letter dated November 12, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML15092A856 and ML15322A089, respectively), Southern Nuclear Operating Company requested a license amendment to modify Technical Specifications (TS) Section 1.0, "Definitions", Limiting Conditions for Operation and Surveillance Requirement Applicability Section 3.4.9, "RCS Pressure and Temperature (P/T) Limits," and Section 5.0, "Administrative Controls," at the Edwin I. Hatch Nuclear Plant, Units 1 and 2.

The U.S. Nuclear Regulatory Commission staff has found that further information is needed to complete its review. The draft information request is included in the attached document. Please provide your response by within 30 days of the date of this letter.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael D. Orenak".

Michael D. Orenak, Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos.: 50-321, 50-366

cc: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION

REGARDING CHANGES TO TECHNICAL SPECIFICATION SECTIONS 1.0, 3.4.9, AND 5.0

EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

DOCKET NOS. 50-321 AND 50-366

By letter dated April 2, 2015, as supplemented by letter dated November 12, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML15092A856 and ML15322A089, respectively), Southern Nuclear Operating Company requested a license amendment to modify Technical Specifications (TS) Section 1.0, "Definitions", Limiting Conditions for Operation and Surveillance Requirement Applicability Section 3.4.9, "RCS Pressure and Temperature (P/T) Limits," and Section 5.0, "Administrative Controls," at the Edwin I. Hatch Nuclear Plant (HNP), Units 1 and 2.

The U.S. Nuclear Regulatory Commission (NRC) staff has found that further information is needed to complete its review. Please provide the requested information below.

RAI 8

The responses to RAI 2, RAI 4, and RAI 6 from the November 12, 2015, letter included information that could result in revised Pressure Temperature Limit Reports (PLTRs). If this information does revise the PLTRs, please submit a revision for both HNP, Units 1 and 2. If the information does not require revised PLTRs, please provide a justification.

RAI 9

The NRC staff was able to successfully reproduce all of the pressure-temperature (P-T) curves for HNP, Unit 2, for 50.1 effective full power years (EFPY). The NRC staff was able to successfully reproduce all of the P-T curves for HNP, Unit 1, for 38 EFPY except for one portion of Curve C. Figures 1 and 2 provide the results of the NRC's independent evaluation for HNP, Unit 1, at 38 EFPY for Curves B and C, respectively. As noted by the two text box annotations in Figure 1 and the lower text box in Figure 2 that begins with, "Curve C is controlled...", the NRC's evaluation indicates that the licensee's Curve C may not meet ASME Boiler and Pressure Vessel (B&PV) Code, Section XI, Appendix G (2004 Edition, per the PTLR Topical Report BWROG-TP-11-022-A, Revision 1), minimum temperature limits and therefore may be non-conservative.

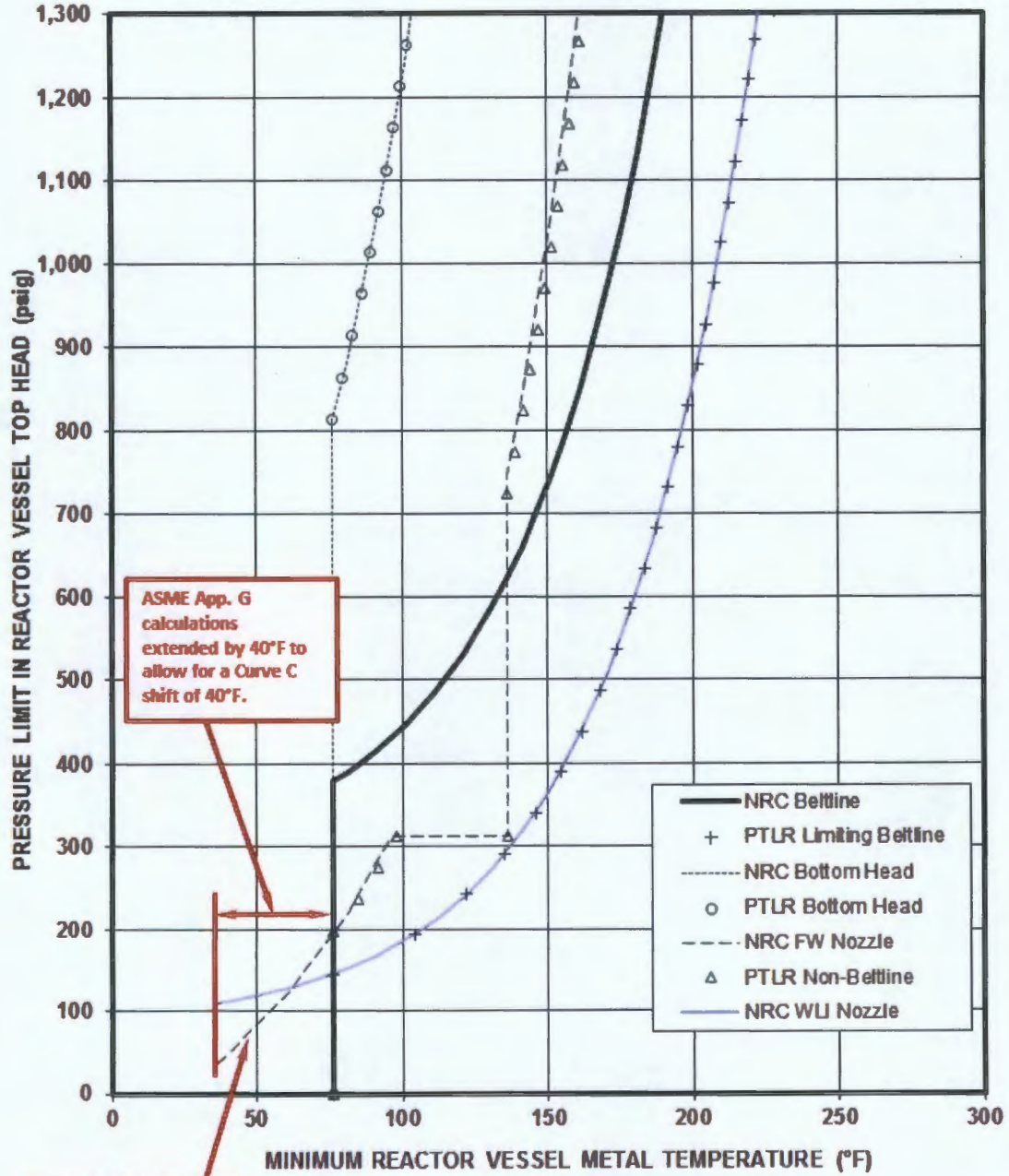
Page 15 of Calculation No. 1001527.304, Rev. 2, as provided in the November 12, 2015, supplement, states that the feedwater nozzle thermal stress intensity factor (K_{IT}) was scaled based on the available temperature differential. The NRC staff approximated this scaling in their independent assessment based on the information available in the documents supplied by the licensee. The NRC staff recognizes that there may be some differences caused by this approximation. However, based on the comparison of results in Figure 1, the staff's

Enclosure

approximation yields very close agreement to the licensee's Curve B for temperatures greater than 76 degrees Fahrenheit (F), so any differences caused by the staff's approximation appear to be insignificant.

Please clarify whether the lower portions of Curve C for Hatch 1 for HNP, Unit 1, 38 and 49.3 EFPY adequately bound the non-beltline region.

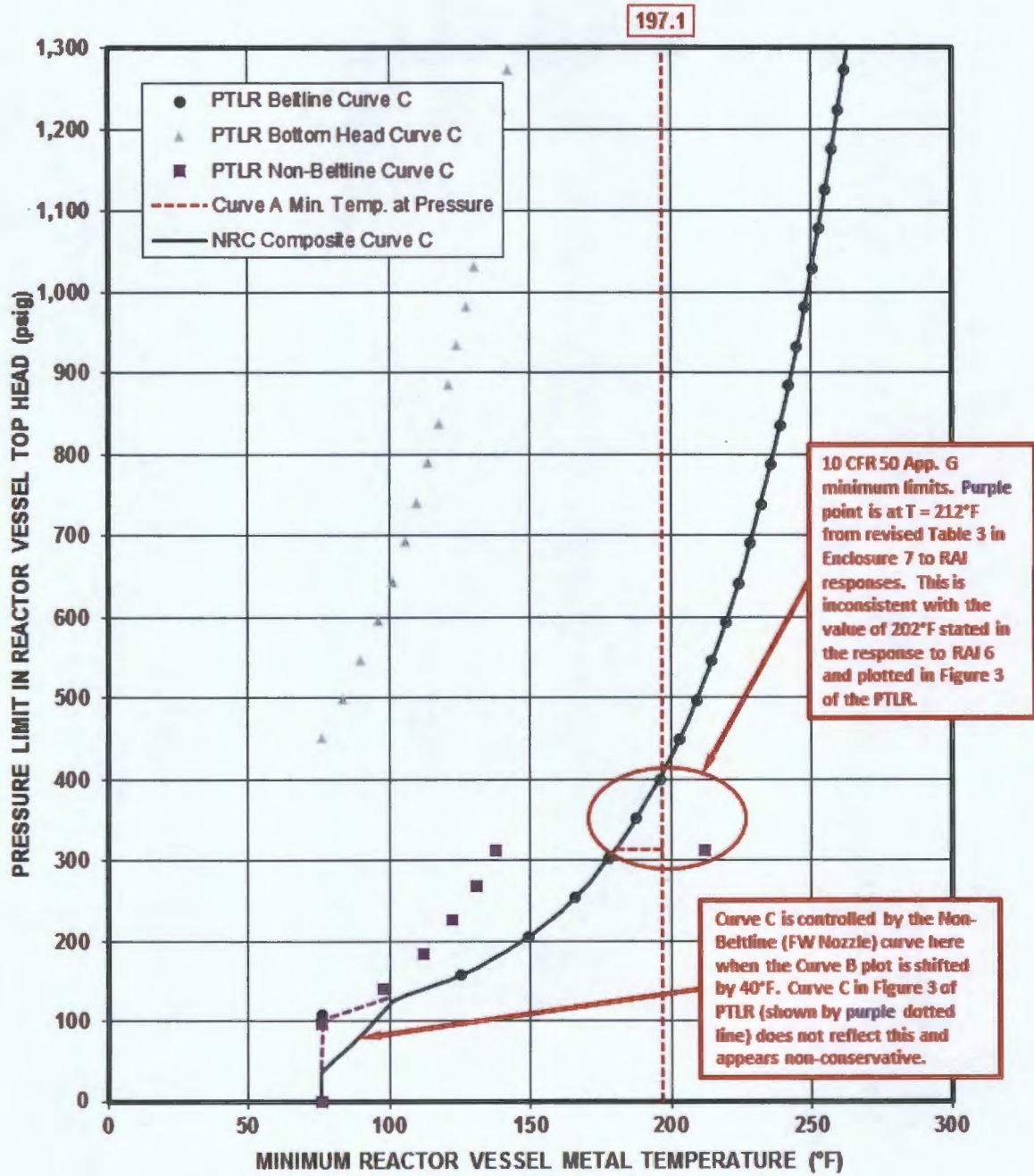
Figure 1: Results of NRC's Independent Calculation of Curve B for Hatch Unit 1 at 38



Unit 1 Heatup-Cooldown Curve B, 38 EFPY

EFPY

Figure 2: Results of NRC's Independent Calculation of Curve C for Hatch Unit 1 at 38



Unit 1 Curve C, 38 EFPY

EFPY

RAI 10

In the response to RAI 6 of the November 12, 2015, supplement, the licensee states that the values in Table 3 of the HNP, Unit 1, PTLR should list a temperature of 202 degrees F for pressures greater than 312.6 pounds per square inch gauge (psig). A revised Table 3 was provided in Enclosure 7 to the licensee's RAI responses. However, revised Table 3 in that enclosure lists a revised temperature of 212 degrees F for pressures greater than 312.6 psig. This value does not match the licensee's response, nor does it match the value plotted in Figure 3 of the HNP, Unit 1, PTLR. Refer to the text box that begins with, "10 CFR 50 App. G minimum limits," in Figure 2 above. Please clarify this discrepancy.

RAI 11

In the response to RAI 7 in the November 12, 2015, supplement, the licensee states,

The current methodology, used to develop the curves in the PTLR, is based on Reference [1]...

However, Reference 1 is the NRC request for additional information, and not a methodology for computing P-T curves. Please provide the correct Reference 1.

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/RA/

Michael D. Orenak, Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos.: 50-321, 50-366

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ADAMS Accession No.: ML15362A609

*via email

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