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Rick J. King
Director
Nuclear Safety Assurance

July 2, 2001

U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Document Control Desk

Subject: River Bend Station
Docket No. 50-458
License No. NPF-47
Response to NRC Request for Additional Information Regarding
Proposed Amendment to Revise Reactor Vessel
Pressure/Temperature Limits (TAC NOS. MB1114 and MB1153),
LAR 2000-26

File Nos.: G9.5, G9.42

References: 1. RBF1-01-0010, dated January 24, 2001, "River Bend Station
Licensing Amendment Request (LAR 2000-26), 'Revision to
reactor vessel pressure/temperature (P/T or P-T) limits' and
application of ASME Code Case N640."
2. RBF1-01-0114, dated May 3, 2001, Request for Additional
Information – LAR 2000-26, (TAC NOS. MB1114 and MB1153)

RBF1-01-0139
RBG-45759

Gentlemen:

Please find attached Entergy Operations, Inc. response to the NRC Request for
Additional Information (RAI) (Reference 2) regarding proposed changes to the reactor
vessel pressure/temperature (P/T or P-T) limits as specified in River Bend Station
Technical Specification 3.4.11.

Based on the guidelines in 10CFR50.92, Entergy Operations has concluded that the
response to the NRC request for additional information involves no additional significant
hazards considerations. The conclusions of the original no significant hazards
considerations remain unchanged. The responses to this RAI introduce no new
commitments.

Attachment 1 of this letter provides the responses to the RAI. This attachment includes
information from General Electric (GE) Nuclear Energy report GE-NE-B13-02094-00-01,

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"Pressure-Temperature Curves for Entergy Operations Inc. (EOI) Using the K_{IC} Methodology" which is considered proprietary to GE. Consistent with the proprietary information notice provided in the preface of the report, General Electric requests information provided in Attachment 1 be withheld from public disclosure pursuant to 10 CFR 2.790(a)(4). A non-proprietary version of the response to the RAI is provided as Attachment 2. An affidavit supporting the proprietary information has been provided by GE (the information owner) as Attachment 3. A return address for response to the affidavit is provided on the affidavit cover letter contained in attachment 3.

In addition to the RAI responses, a reference error was noted in section 4.2 (page 14) of Attachment 4 of Reference 1. The incorrect reference to Table 4-3 has been corrected to reference Table 4-4. A revised page 14 is included in Attachment 1. The non-proprietary version of this page is included in Attachment 2.

Entergy Operations requests the NRC approve this amendment request and use of Code Case N-640 on or before September 1, 2001, such that it may be implemented prior Refueling Outage 10, which is scheduled in the Fall of 2001.

Pursuant to 28 U.S.C.A. Section 1746, I declare under penalty of perjury that the foregoing is true and correct.

Executed on July 2, 2001.

Very truly yours,



RJK/AS

Attachment: 1. Response to Request for Additional Information (Proprietary)
2. Response to Request for Additional Information (Non-Proprietary)
3. Affidavit Concerning Proprietary Information

Response to NRC Request for Additional Information Regarding Proposed Amendment to Revise Reactor
Vessel Pressure/Temperature Limits (TAC NOS. MB1114 and MB1153), LAR 2000-26

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cc: U. S. Nuclear Regulatory Commission
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ATTACHMENT 2

TO

LETTER NO. RBF1-01-0139

Response to Request for Additional Information

Non-Proprietary Version

Question 1

Paragraph 4.2.1.2, "Pressure Temperature Curves for Entergy Operations, Inc. (EOI) Using the K_{IC} Methodology" gives the values of the fluence used for the estimation of the 32 effective full power years P/T limit curves. The justification states that, "The values used are the currently licensed values." Please provide the original reference which describes how these values were derived and/or calculated.

Response

In direct response to a Staff request, the vessel fluence used for the current P/T limit curves was estimated to support approval of the 105% power uprate amendment, Amendment 114 to NPF-47 (TAC NO. MA6185). Reference 3 describes the methodology used to develop this fluence value. The relevant pages (Appendix E of Reference 3) are attached. For further clarification, the fluence values used in the proposed P-T curves requested by LAR 2000-26 are the same as those used for the current curves approved by Amendment No. 114. The Staff evaluated the basis for the fluence determinations and accepted the P-T Limit Curves submitted in Amendment No. 114 based on 32 EFPY with a limited use up to 16 EFPY (ref. NRC Safety Evaluation from Mr. Jefferey F. Harold to Mr. Edington dated October 6, 2000).

EOI understands the Staff's concerns regarding the RBS fluence calculations. Therefore, consistent with Amendment 114, Entergy proposes acceptance of the revised P/T curves based on their use of a 32 EFPY fluence value with a limited use not to exceed 16 EFPY of operation. This provides adequate conservatism to account for any anomalies that may exist in the current fluence determination methodology until revised P/T curves, which are developed based on the test results from the RBS RPV surveillance capsule program, are reviewed and approved by the Staff. This proposal is consistent with the Staff's evaluation of the current RBS P/T curves previously approved in the aforementioned correspondence.

Question 2

Page 29: It was suggested on page 29, for the feedwater nozzle/upper vessel region, that a coolant temperature change of 20 degrees Fahrenheit per hour ($^{\circ}\text{F/hr}$) existed during the pressure test and its effect of [] was included in the computed value of $(T-RT_{\text{NDT}})$. Why was a similar adjustment not made for the bottom head in its tabulated values shown on page 25?

Response

As noted on page 27, []

In the case of the feedwater nozzle, the stresses are based upon a WRC 175 methodology that does not consider thermal stresses. []

Question 3

Page 30: [] Please clarify.

Response

As noted on page 30, []

Question 4

Page 57: The P/T limit curve for the core beltline B' was missing in Figure 5-10. Please provide a complete Figure 5-10.

Response

The P/T limit curve for the core beltline B' was included in the final report as issued (The correct values are listed in Table 5-10). The line is difficult to see due to the coloring/shading of the line. A revised Figure 5-10 (page 57) is attached with the P/T limit curve for the core beltline B' clearly marked.

References:

1. Letter from R. E. Moody (NRC) to R.. K. Edington (Entergy), "River Bend Station, Unit 1 – Request for Additional Information – License Amendment Request (LAR 2000-26) to Revise Reactor Vessel Pressure/Temperature Limits (TAC Nos. MB1114 and MB1153), dated May 3, 2001.
2. S. A. Kleinsmith, "Pressure Temperature Curves for Entergy Operations, Inc. (EOI) using the K_{IC} Methodology River Bend," GE-NE-B13-02094-00-01, Revision 0, January, 2001. (GE Proprietary)
3. R. G. Carey, "105% Power Uprate Evaluation Report for Entergy Operations, Inc. River Bend Station," GE-NE-A22-00081-12, Revision 0, February 1999.

Appendix E

**Estimated Vessel Neutron Fluence
for Power Uprate per
Subsection 2.2**

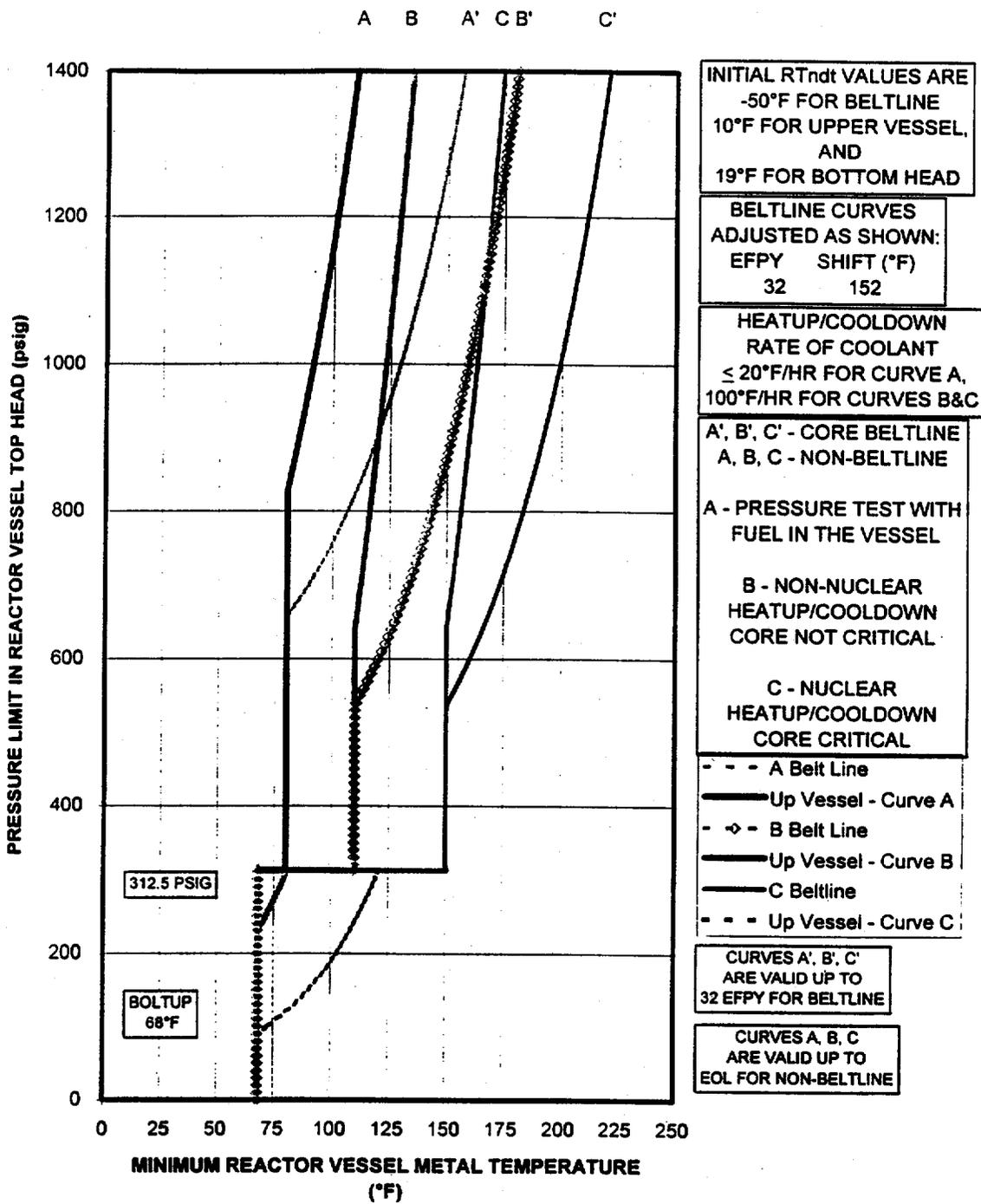


Figure 5-10. P-T Curves A, B, and C up to 32 EFPY