Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381-2000

DEC 1 9 2001

10 CFR 50.90

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

Gentlemen:

In the Matter of) Docket No.50-390
Tennessee Valley Authority)

WATTS BAR NUCLEAR PLANT (WBN) UNIT 1 - RESPONSES TO REQUEST FOR ADDITIONAL INFORMATION (RAI) REGARDING TRITIUM PRODUCTION - INTERFACE ITEM NUMBER 3 - COMPLIANCE WITH DNB CRITERION - CLARIFICATION TO PREVIOUS RAI RESPONSE DATED SEPTEMBER 21, 2001 TAC NO. MB1884

The purpose of this letter to provide clarifications to TVA's response dated September 21, 2001, to NRC's request for additional information regarding the Tritium Production Program Interface Item Number 3, "Compliance With DNB Criterion." The need for this clarification was identified during a telecon on November 28, 2001, between the NRC's WBN Project Manager, the NRC Staff reviewer, the TVA Tritium Program Manager, and Westinghouse representatives. The initial RAI request was made via email from NRC Project Manager for WBN on September 4, 2001, and was formalized in a subsequent letter dated September 14, 2001. Initial information related to this interface issue was supplied by TVA on May 1, 2001, and with the license amendment request dated August 20, 2001. The enclosure provide clarifications to previous TVA responses and revisions to two figure titles.

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There are no regulatory commitments made by this letter. If you have any questions about this letter, please contact me at (423) 365-1824.

Sincerely,

P. L. Pace
Manager, Site Licensing
and Industry Affairs

Enclosures
cc: See page 3

Subscribed and sworn to before me
on this 19th day of December 2001

E. Jeannette Long
Notary Public

My Commission Expires May 21, 2005

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PLP:RAS
Enclosure
cc (Enclosure):
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ENCLOSURE
TENNESSEE VALLEY AUTHORITY
WATTS NUCLEAR PLANT (WBN)
UNIT 1
DOCKET NO. 390
RESPONSE TO NRC'S REQUEST FOR ADDITIONAL INFORMATION

For the TVA letter dated September 21, 2001, the following clarifications need to be made:

On Page E-1, insert the following sentence after Response No. 1, Item B.2:

These figures are discussed further in Response 3.

On page E-3, revise Response No. 3 to read as follows (changes denoted by revision bars):

Question No. 3

For the comparisons stated in the first paragraph of Section 2.4.4.5, on page 2-28, please provide the results of the comparisons (i.e., plots, sketches, etc.)

Response No. 3

Figure 3.1 shows the results of the analysis of the Condition I axial power shapes for an equilibrium core of TPBARs. The figure plots DNBR versus Axial Offset, where Axial Offset is defined as the power generated in the top half of the core minus the power generated in the bottom half of the core divided by the total power generated (times 100 to give the standard unit of percent). Each circle or x corresponds to a power shape for a thimble or typical cell, respectively. The dotted line which bounds the data points is taken from the reference power shape analysis for a non-tritium core. This line is used to verify future cycle specific power shapes. The horizontal limit lines show on the figure for the thimble and typical cell correspond to a DNB limiting axial power shape used to analyze such transients as Loss of Flow.

Figures 3.2A/B show the results of the analysis of the Condition II axial power shapes for an equilibrium core of TPBARs for typical and thimble cells, respectively. The figures plot Delta T_{in} versus Delta I, where Delta I is defined as percent of core rated power generated in the top half of the core minus percent of core rated power generated in the bottom half of the core. Each point corresponds to a power shape.

These figures show that the limit lines bound the accident power shapes associated with the tritium cores. The limit lines were established for non-tritium cores and are applicable to the tritium cores. Theses lines were used as input to establish the f (delta-I) function setpoints in the Overtemperature Delta-T equation.

On pages E-7 and E-8, revise the titles for Figures 3.2A and 3.2B as per attached pages (changes denoted by revision bars):

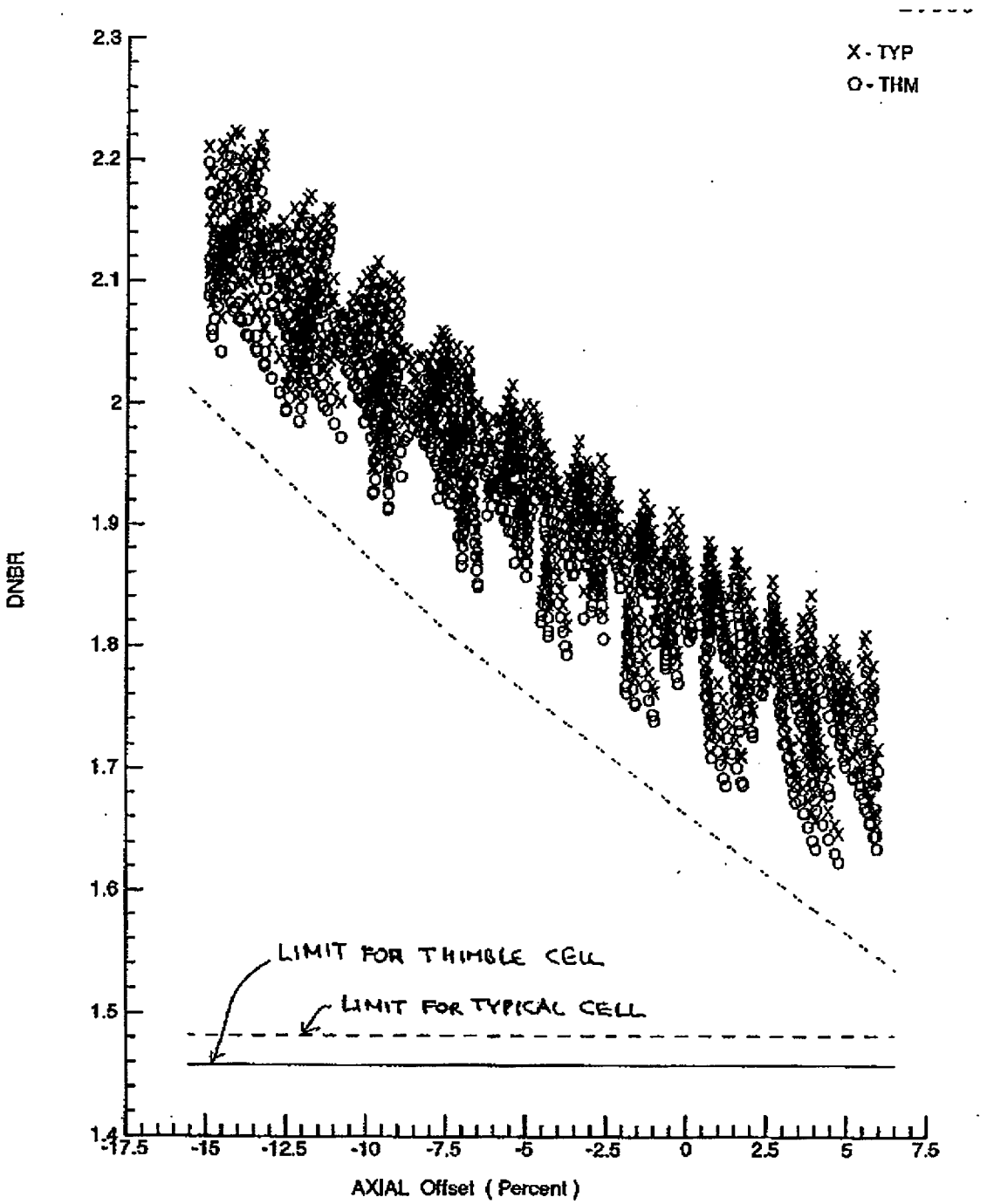

Figure 3.1
Results of Analysis of Condition I Power Shapes

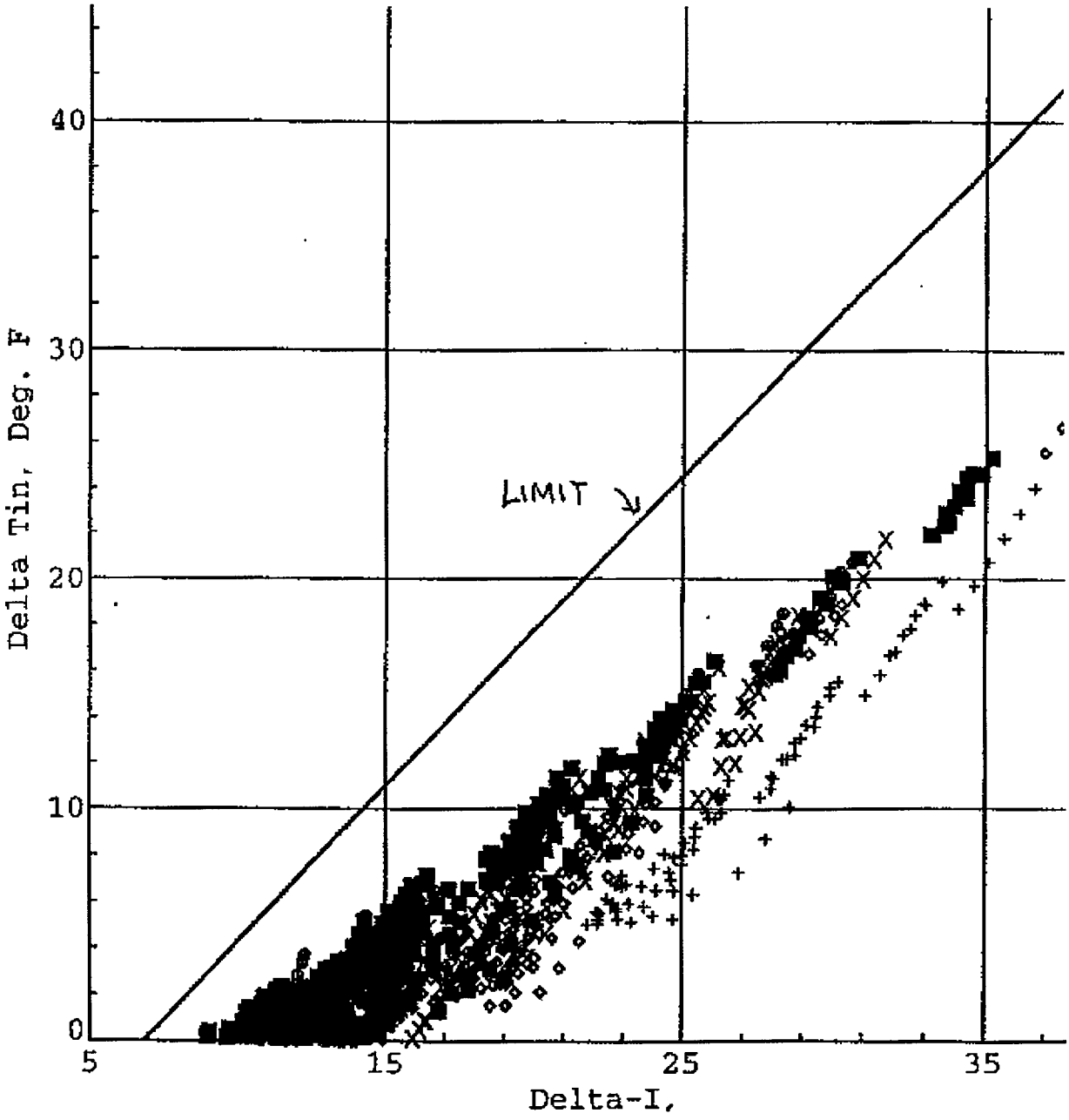

Figure 3.2A
Results of Analysis of Condition II Power Shapes
Typical Cell

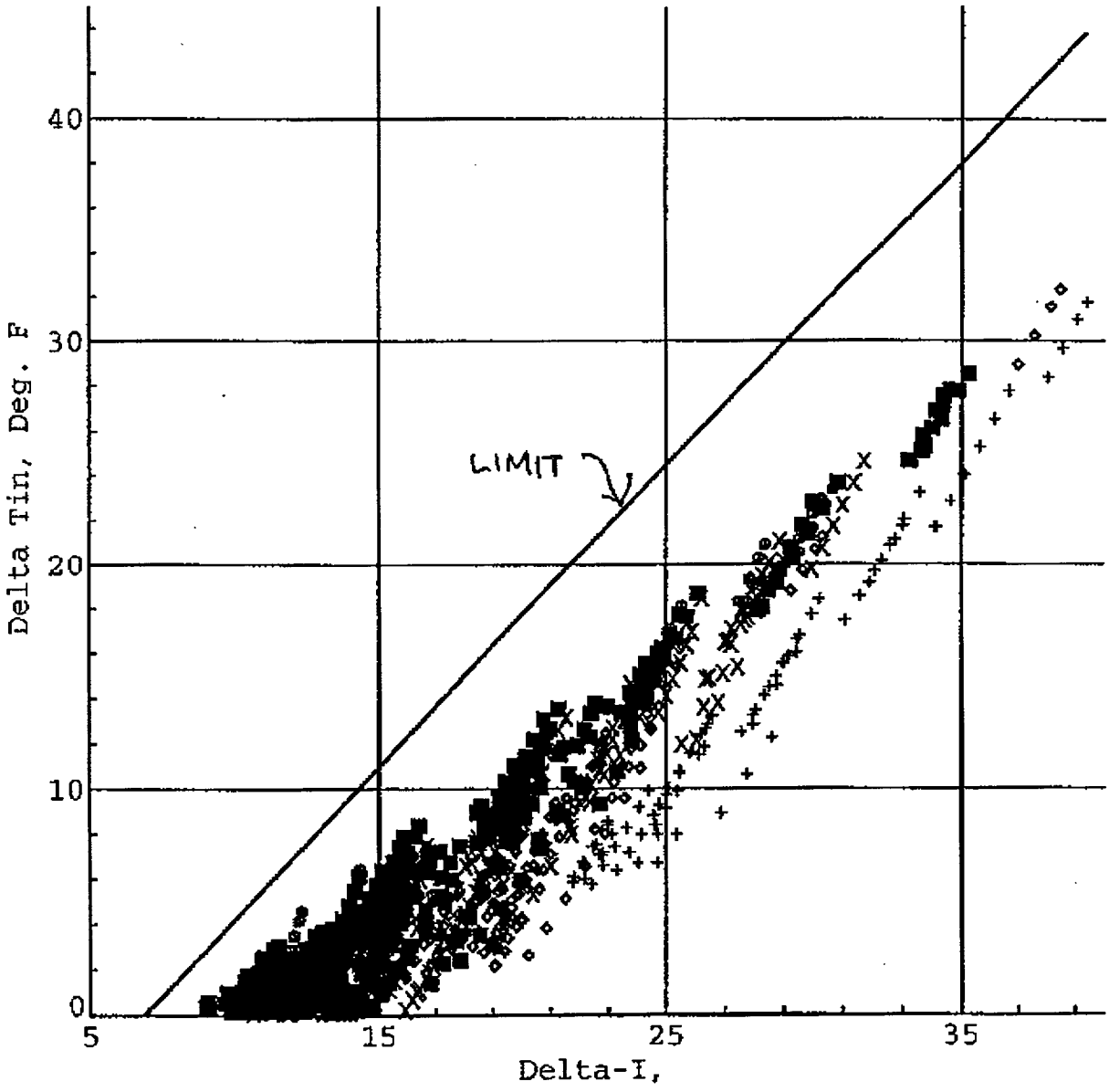

Figure 3.2B
Results of Analysis of Condition II Power Shapes
Thimble Cell