

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower 11

81 AUG 24 P12:50

August 19, 1981

Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region II - Suite 3100
101 Marietta Street
Atlanta, Georgia 30303



Dear Mr. O'Reilly:

OFFICE OF INSPECTION AND ENFORCEMENT BULLETIN 79-12 - RII:JPO
50-259, -260, -296 - BROWNS FERRY NUCLEAR PLANT

My letter to you dated July 30, 1979 provided TVA's response to the subject bulletin. Enclosed is a supplemental response to item 3 of the subject bulletin based on further evaluations of rod withdrawal sequences. If you have any questions, please call Jim Domer at FTS 857-2014.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills
L. M. Mills, Manager
Nuclear Regulation and Safety

Enclosure

cc: Office of Inspection and Enforcement (Enclosure)
Division of Reactor Operations Inspection
U.S. Nuclear Regulatory Commission
Washington, DC 20555

IE11
3
1/1

8109240374 810819
PDR ADOCK 05000257
Q PDR

ENCLOSURE
OIE BULLETIN 70-12
SUPPLEMENTAL RESPONSE
BROWNS FERRY NUCLEAR PLANT
(50-250, -260, -296)

Item 3 of the subject bulletin requires licensees to "review and evaluate your control rod withdrawal sequences to assure that they minimize the notch worth of individual control rods, especially those withdrawn immediately at the point of criticality. . . ." In response to this item we have further evaluated rod withdrawal sequences, comparing notch worths of control rods. We have found that the notch worths are minimized by withdrawing the rods in RWM groups 1 through 4 in spiral sequence from the core periphery to the center. This withdrawal sequence is currently being used for the units at Browns Ferry since these notch worths were found to be less than those for the sequence with bank withdrawal of RWM groups 3 and 4 between position 0% and 12.

We continuously evaluate our withdrawal sequence for each unit and cycle to ensure that notch worths are acceptable. Additionally, the results of each sequence analysis are used to identify rods which have potentially high relative worths. Notch-step withdrawal is then specified for these rods during the approach to critical.

This modified sequence has been coordinated with General Electric Company, and they are in agreement with this approach to minimize notch worths for the Browns Ferry units. We intend to continue to evaluate the rod withdrawal sequences for each specific unit and cycle to ensure that the notch worths remain acceptable. Presently the same sequence is being used on all the Browns Ferry units; however, future reload cores could dictate modification of the withdrawal sequence for one or more units in order to maintain low notch worths. We believe that this cycle-specific approach is better than specifying a permanent generic withdrawal sequence for minimizing notch worths.