

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

500C Chestnut Street Tower II

TVA BFNP TS 115

JAN 8 1979

Mr. Harold R. Denton, Director  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

POOR ORIGINAL

Dear Mr. Denton:

In the Matter of the ) Docket No. 50-259  
Tennessee Valley Authority )

In my letters to you of September 8, October 5, and November 30, 1978, we submitted for NRC review an amendment request and corrections to the amendment request to change the technical specifications of Browns Ferry Nuclear Plant unit 1. As a result of a meeting with members of your staff on January 3, 1979, TVA has concluded that an extra conservatism on the MCPR operating limit should be applied to the limiting pressure transient results indicated in General Electric's topical report NEDO-24136, Revision 1, November 1978. This extra conservatism has been justified in the light of any nonconservatism that might exist within the REDY transient code. Therefore, enclosed are requested changes to the Browns Ferry Nuclear Plant unit 1 technical specifications which supplement the above requests. Also enclosed are changes requested by your staff concerning the recirculation pump trip modification.

In order that startup from refueling is not delayed, we would appreciate receiving approval of all the technical specification changes mentioned in this letter by January 12, 1979.

Very truly yours,

*J. E. Gilleland*

J. E. Gilleland  
Assistant Manager of Power

Subscribed and sworn to before  
me this 8<sup>th</sup> day of January 1979.

*Bryant M. Lowery*  
Notary Public

My Commission Expires April 4, 1982

Enclosures  
cc: See page 2

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Mr. Harold R. Denton

JAN 8 1979

cc (Enclosures):

Mr. Charles R. Christopher  
Chairman, Limestone County Commission  
P.O. Box 188  
Athens, Alabama 35611

Dr. Ira L. Myers  
State Health Officer  
State Department of Public Health  
State Office Building  
Montgomery, Alabama 36104

$$LHGR_{max} = LHGR_d [1 - (L/P/P)_{max}] (L/LT)$$

$LHGR_d$  = Design LHGR = 18.5 kW/ft. for 7x7 fuel  
 = 13.7 kW/ft. for 8x8 fuel

$(L/P/P)_{max}$  = Maximum allowed spiking penalty  
 = 0.026 for 7x7 fuel  
 = 0.022 for 8x8 fuel

$L$  = Total core length = 12.0 feet for 7x7 fuel  
 = 12.2 feet for 8x8 fuel

$l$  = Axial position above bottom of core

If at any time during operation it is determined by normal surveillance that the limiting value for LHGR is being exceeded, action shall be initiated within 15 minutes to restore operation to within the prescribed limits. If the LHGR is not returned to within the prescribed limits within two (2) hours, the reactor shall be brought to the Cold Shutdown condition within 36 hours. Surveillance and corresponding action shall continue until reactor operation is within the prescribed limits.

K. Minimum Critical Power Ratio (MCPR)

The MCPR operating limit from the beginning of cycle 3 to the end of cycle 3 minus 2000 MWd/t is 1.20 for 7x7 fuel and 1.24 for 8x8 and 8x8R fuel; the limit from the end of cycle 3 minus 2000 MWd/t to the end of cycle 3 is 1.25 for 7x7 fuel and 1.30 for 8x8 and 8x8R fuel. These limits apply to steady state power operation at rated power and flow. For core flows other than rated, the MCPR shall be greater than the above limits times  $K_f$ .  $K_f$  is the value shown in Figure 3.3.2.

If at any time during operation it is determined by normal surveillance that the limiting value for MCPR is being exceeded, action shall be initiated within 15 minutes to restore operation to within the prescribed limits. If the steady state MCPR is not returned to within the prescribed limits within two (2) hours, the reactor shall be brought to the Cold Shutdown condition within 36 hours. Surveillance and corresponding action shall continue until reactor operation is within the prescribed limits.

L. Reporting Requirements

If any of the limiting values identified in Specifications 3.5.1, J, or K are exceeded and the specified remedial action is taken, the event shall be logged and reported in a 30-day written report.

K. Minimum Critical Power Ratio (MCPR)

MCPR shall be determined daily during reactor power operation at > 25% rated thermal power and following any change in power level or distribution that would cause operation with a limiting control rod pattern as described in the bases of Specification 3.3.

TABLE 4...B (Continued)

<u>Function</u>	<u>Functional Test</u>	<u>Calibration</u>	<u>Instrument Check</u>
RHR Area Cooler Fan Logic	Tested during functional test of instrument channels, RHR motor start and thermostat (RHR area cooler fan). No other test required.	N/A	N/A
Core Spray Area Cooler Fan Logic	Tested during logic system functional test of instrument channels, core spray motor start and thermostat (core spray area cooler fan). No other test required.	N/A	N/A
Instrument Channel - Core Spray Motors A or D Start	Tested during functional test of core spray pump (refer to section 4.5.A).	N/A	N/A
Instrument Channel - Core Spray Motors B or C Start	Tested during functional test of core spray pump (refer to section 4.5.A).	N/A	N/A
Instrument Channel - Core Spray Loop 1 Accident Signal	Tested during logic system functional test of core spray system.	N/A	N/A
Instrument Channel - Core Spray Loop 2 Accident Signal	Tested during logic system functional test of core spray system.	N/A	N/A
RHRSV Initiate Logic	once/6 months	N/A	N/A
RPT initiate logic	once/month	N/A	N/A
RPT breaker	once/operating cycle	N/A	N/A

NOTES FOR TABLE 1.1.B (Continued)

10. Only one trip system for each cooler fan.
11. In only two of the four 4160 V shutdown boards. See note 13.
12. In only one of the four 4160 V shutdown boards. See note 13.
13. An emergency 4160 V shutdown board is considered a trip system.
14. RHRSW pump would be inoperable. Refer to section 4.5.C for the requirements of a RHRSW pump being inoperable.
15. The accident signal is the satisfactory completion of a one-out-of-two taken twice logic of the drywell high pressure plus low reactor pressure or the vessel low water level ( $\geq$  378" above vessel zero) originating in the core spray system trip system.
16. The ADS circuitry is capable of accomplishing its protective action with one operable trip system. Therefore one trip system may be taken out of service for functional testing and calibration for a period not to exceed 8 hours.
17. Two RPT systems exist, either of which will trip both recirculation pumps. During monthly functional testing, only one RPT system may be put in test mode during a single time interval for testing. If both RPT systems are inoperable or if 1 RPT system is inoperable for more than 30 consecutive days, the reactor power shall be reduced to below 30% power within 24 hours.