

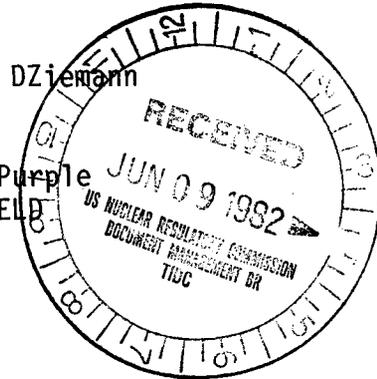
JUN 9 1982

DISTRIBUTION.
Docket Nos. 50-390/391

Docket Nos: 50-390
and 50-391

Mr. H. G. Parris
Manager of Power
Tennessee Valley Authority
500A Chestnut Street, Tower II
Chattanooga, Tennessee 37401

LB #4 r/f
NRC PDR
Local PDR
TERA
NSIC
EAdensam
TKenyon
MDuncan
DEisenhut/RPurple
Attorney, OELB
I&E
ACRS (16)
DFischer



Dear Mr. Parris:

Subject: Initial Test Program for the Watts Bar Nuclear Plant,
Units 1 and 2

In January 1982 during a telephone conversation with your staff, we discussed the inclusion of thirteen additional systems into the Watts Bar initial test program. The thirteen systems are:

- (1) Condensate system.
- (2) Leakage tests of ECC systems and testing of leak detection and pumping systems provided to control leakage from ECC systems.
- (3) Ventilation systems for the intake pumping station.
- (4) Turbine building area ventilation system.
- (5) Raw cooling water system.
- (6) Hotwell level control system.
- (7) Condensate storage tank auxiliaries including systems used for temperature control of tanks and suction lines and indication and alarm functions.
- (8) 48 VDC system.
- (9) Failed fuel detection system.
- (10) Chemical addition systems for the secondary plant.
- (11) Turbine gland sealing system and gland seal water system.
- (12) Standby lighting system.
- (13) Condenser Circulating Water.

In a letter dated April 19, 1982, the staff requested that tests of these systems be included in Chapter 14 of the Watts Bar FSAR or justification be provided to show that these systems do not meet any of six criteria for including plant features in the start up test program.

The staff has reviewed your responses dated April 21 and May 20, 1982, and has re-evaluated the testing of these systems based on their importance to safety. The staff concurs with TVA's commitment to include Test (2), (3), (9) and (12) above, but requires further clarification as stated below. In addition, the staff has concluded that Test (7) and (8) above should be included in the Watts Bar Initial Test Program and that appropriate abstracts of the test procedures should

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be included in the FSAR and submitted for our review. The adequacy of the testing for the remaining seven systems within the Non-Critical Systems Test Program will be the subject of review by NRC regional personnel.

Our need for clarification and the bases for the above conclusions are as follows:

- (2) Leakage tests of ECC systems and testing of leak detection and pumping systems provided to control leakage from ECC systems.

Your May 20, 1982, submittal states that these systems will be tested under Test No. TVA-44B. The staff has previously notified you that additional information is needed for the TMI Action plan Item III.D.1.1 of NUREG-0737. This item calls for a program to reduce leakage from systems outside containment that could contain highly radioactive fluids during a serious transient or accident. A preoperational test of the leakage control systems and Test No. TVA-44B, ECCS Leak Detection System, should be consistent with the leak reduction measures and leakage rate measurements set forth in NUREG-0737 and should contain appropriate acceptance criteria that demonstrate the effectiveness of the leakage reduction program.

- (3) Ventilation systems for the intake pumping systems.

Your May 20, 1982, submittal states that this system will be tested under Test No. TVA-69. We have been informed during a May 25, 1982, telecon with your staff that this test is in the process of being written and has not yet been included in the Watts Bar FSAR.

The Watts Bar FSAR, page 9.4-37, states that "...the Intake Pumping Station Ventilation System has the capabilities needed for normal operations and for accident mitigation. These are described below.

The functional analysis of this system shows that:

1. Adequate flow-through ventilation is provided for the ERCW pump area during all credible environmental conditions.
2. Forced air ventilation will be provided to each mechanical equipment room and the electrical equipment room to maintain acceptable temperatures. See Section 9.4.5.1.1."

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With this in mind, we request your staff to write the abstract for the initial plant test to demonstrate the adequacy of The Intake Pumping Station Ventilation System and ensure that equipment and room temperatures would remain within acceptable limits under all credible environmental and accident conditions.

- (7) Condensate storage tank auxiliaries including systems used for temperature control of tanks and suction lines and indication and alarm functions.

On page 10.4-40 of the Watts Bar FSAR, it is stated that "The preferred sources of water for all auxiliary feedwater pumps are the two 397,700 gallon condensate storage tanks. A minimum of 200,000 gallons in each tank...".

Since the water from these tanks is the preferred source used to cool the plant under normal and emergency conditions, this entire system should be tested prior to significant power operation. Provide an abstract of a test that demonstrates proper operation of all indicators, instruments and controls.

- (8) 48 Volt D.C. system.

The Watts Bar FSAR, Section 8.3.2.1.2, refers to this system as non-safety related. However, this system supplies the PAX communications system. Section 9.5.2.2 of the FSAR states:

"Private Automatic Exchange (PAX) - A 200-line PAX is installed to provide primary 2-way communications throughout the Watts Bar Nuclear Plant. This PAX is equipped with provisions for:

1. Regular 2-way telephone conversation
2. Code call and answer
3. Fire alarm
4. Paging call and answer over PAX instruments
5. Executive right-of-way
6. Single digit access to electrical control room manual telephone switchboard
7. Single digit access to system direct dialing circuits
8. Revertive call switch

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The power for the PAX is supplied from a 48V d.c. source consisting of two 100-ampere battery chargers, ...".

Since this system is critical to performance of operations to mitigate the consequences of accidents, provide an abstract of a preoperational test that will demonstrate satisfactory system performance in all modes of operation.

(9) Failed Fuel Detection System

Your May 20, 1982, submittal stated that this system will be tested under Test No. TVA-28. We have been informed during the May 25, 1982, telecon with your staff that this test is being revised to include the failed fuel detection system and has not yet been included in the Watts Bar FSAR.

This system is described in Section 9.3.5 of the Watts Bar FSAR. It is designed to detect delayed neutrons in the reactor coolant to give a prompt indication of fuel cladding failure. The response time of the system is given as 60 seconds.

This system is provided for early detection of fission products in the reactor coolant system so action can be taken to limit the release of radioactive materials. To minimize potential releases of radioactive materials, this system should be tested prior to significant power operation. With this in mind, we request your staff to revise Test No. TVA-28 to demonstrate satisfactory performance of this system.

(12) Standby lighting system

Your May 20, 1982, submittal states that this system will be tested under Test No. TVA-36. This abstract is under review and your staff will be notified if we have any further need for additional information.

In addition to the above requests for abstracts and additional information, we have informed your staff of the need to show conformance (or justify any deviations) of the Watts Bar preoperational tests with the following Regulatory Guides:

- a) Regulatory Guide 1.20, Revision 2
- b) Regulatory Guide 1.52, Revision 2
- c) Regulatory Guide 1.79, Revision 1

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The revisions to these Regulatory Guides are applicable to the Watts Bar preoperational program, and no statement of conformance or justification for non-conformance has been submitted by your staff. Please provide this information.

If you have any questions concerning these matters, please contact the project manager, T. J. Kenyon, at (301) 492-7266.

The reporting and/or recordkeeping requirements contained in this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P.L. 96-511.

Sincerely,

*Original signed by
Frank J. Miraglia*

for
Robert L. Tedesco, Assistant Director
for Licensing
Division of Licensing

cc: See next page

83

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SURNAME ▶	T. Kenyon/hmc	M. Duncan	D. Fischer	D. Ziemann	E. Adensam	R. Tedesco	
DATE ▶	5/2/82	6/3/82	6/4/82	6/4/82	6/7/82	6/7/82	