TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

March 26, 1985

Director of Nuclear Reactor Regulation
Attention: Ms. E. Adensam, Chief
Licensing Branch No. 4
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Ms. Adensam:

In the Matter of the Application of) Docket Nos. 50-390
Tennessee Valley Authority) 50-391

Please refer to TVA letter dated January 24, 1984 by which we transmitted a response to item II.F.1 of NUREG-0737. Enclosed is a revision to this item.

If you have any questions concerning this matter, please get in touch with K. Mali at FTS 858-2682.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

D. E. McCloud,
Nuclear Engineer

Sworn to and subscribed before me
this 26th day of Mar. 1985.

Bryant M. Lowery
Notary Public

My Commission Expires 4/8/86

Enclosure
cc: U.S. Nuclear Regulatory Commission (Enclosure)
Region II
Attn: Dr. J. Nelson Grace, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

A001

ENCLOSURE

REVISION TO THE II.F.1 POSITION SUBMITTED IN
L. M. MILLS' LETTER TO E. ADENSAM DATED JANUARY 24, 1984
(See Page 1 of the Enclosure)

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
NUREG-0737, ITEM II.F.1
REQUEST FOR EXEMPTION TO INSTALL HIGH-RANGE NOBLE GAS MONITORS
ON THE AUXILIARY BUILDING VENT

The gaseous effluent monitoring system for the Watts Bar Nuclear Plant (WBN) does not include a high-range monitor for the auxiliary building vent, since the release is diverted to the shield building vent for design basis accidents. Auxiliary building vent isolation and operation of the auxiliary building gas treatment system (ABGTS), an engineered safety feature, provide the required high-range postaccident monitoring capability for the auxiliary building postaccident release path.

There is an existing radiation monitor in the auxiliary building vent that provides direct indication and recording in the main control room. The monitor has the following range:

Particulate - 4.7×10^{-11} to 1.9×10^{-5} Ci/cc
Iodine - 1.0×10^{-9} Ci/cc in 44 min to 6.5×10^{-3} Ci-min/cc
Gaseous - 4.0×10^{-7} to 1.7×10^{-1} Ci/cc

In addition, this monitor provides a signal to automatically initiate secondary containment isolation and ABGTS startup upon detection of high radiation in the vent as decribed below.

Figure 1 is a general outline of the WBN. It shows the location of the auxiliary building vent and the shield building vents in relation to the plant. The auxiliary building vent (Figure 2) is isolated and not used following an accident. It is used only during normal operation to exhaust ventilation air from the auxiliary building. The shield building vent (Figure 3) is used during containment purging and postaccident to exhaust filtered air from the secondary containment.

Secondary containment (which includes the auxiliary building vent) is automatically isolated and both trains of the ABGTS are automatically placed in service upon receipt of any one of the following signals:

1. Phase A containment isolation (train A or B).
2. High radiation in the fuel handling area (train A or B)
3. High auxiliary building inlet air temperature (train A or B).
4. Manual signal from main control room (train A or B).
5. High radiation signal from the auxiliary building vent monitor.

The logic which initiates isolation of the auxiliary building and auxiliary building vent is shown schematically in Figure 4. With the exception of the auxiliary building vent radiation monitor channel, the auxiliary building isolation and ABGTS start-up signals are initiated by trained, redundant safety-grade instrumentation. The auxiliary building vent radiation monitor signal is buffered (a class 1E isolation device is installed which separates class 1E equipment from nonclass 1E equipment and prevents any adverse interaction).