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

February 20, 1981

Director of Nuclear Reactor Regulation
Attention: Mr. R. L. Tedesco, Assistant Director
of Licensing
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Tedesco:

In the Matter of the)
Tennessee Valley Authority)

Docket Nos. 50-259
50-260
50-296

In your letter to H. G. Parris dated November 4, 1980, TVA was requested to provide information regarding the flammability of suspended ceiling tile in the control rooms at TVA nuclear plants. An interim report was provided to you for the Browns Ferry Nuclear Plant on January 14, 1981. Enclosed are the results of our investigations to date. We anticipate transmitting another report on this subject on or before April 3, 1981.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Regulation and Safety

Subscribed and sworn to before
me this 20th day of Feb. 1981.

Paulette H. White
Notary Public

My Commission Expires 9-5-84

Enclosure

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ENCLOSURE

CONTROL ROOM CEILING TILE FLAMMABILITY
BROWNS FERRY NUCLEAR PLANT

The results of our evaluation of the control room ceiling tile at our Browns Ferry Nuclear Plant are provided below.

The suspended ceiling in the main control room at Browns Ferry is constructed of molded prismatic acrylic plastic panels. TVA has identified the acrylic plastic used in the manufacturing process for these panels as being identical to Plexiglas G, as manufactured by Rohm and Haas, Incorporated. Plexiglas G is listed as a slow burning plastic material by Underwriters Laboratory (UL) as designated on UL cards M44933A and 3, and guide QLZQ2 dated March 18, 1971.

These panels have not been tested under ASTM E84 test and are not listed by the UL in the Building Materials Directory. However, the following test results are known and are based on tests conducted on the acrylic plastic panel material according to the designated standards:

1. Minimum self-ignition temperature of 450 degrees C in accordance with ASTM D 1929-68.

2. Maximum smoke density rating of 10 in accordance with ASTM test D 2843-70.

3. Deflection temperature of 75 degrees C in accordance with ASTM test D 648-56.

4. Flammability rate of 1.9 inches per minute in accordance with ASTM D 635.

In response to recent NRC concerns we are evaluating the ceiling system designs and the alternatives available. Several alternatives which are under consideration are: (1) removing all ceiling tiles, (2) modifying the ceiling with a combination of nontranslucent panels and new light fixtures, and (3) locating approved translucent material. Problems with each of the options have been raised which affect the ability to resolve this issue. These include glare problems when all panels are removed, potential HVAC problems due to the ceiling design acting as an air plenum, and control board illumination problems if nontranslucent panels are installed.

We do not have a final resolution of the problems at this time, but we are doing everything possible to devise the best acceptable solution.