

# TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401  
400 Chestnut Street Tower II

November 2, 1983

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

Dear Mr. Denton:

In the Matter of the ) Docket Nos. 50-259  
Tennessee Valley Authority )

By letter from D. B. Vassallo to H. G. Parris dated December 23, 1982 we were requested to review the IREP analysis of Browns Ferry Nuclear Plant unit 1 done by EG&G Idaho and provide comments on it. In discussions with your staff we had committed to provide such comments by this time. The following is a discussion of why our review and comments on the IREP analysis have been delayed. Also discussed briefly are errors in the IREP discovered during an overview of the analysis.

TVA's detailed evaluation of the public health risk of Browns Ferry unit 1 (BF1) continues through the efforts of the Browns Ferry Probabilistic Risk Assessment (PRA) team. Until this work is completed, an evaluation of the IREP report cannot be completed. Since the PRA work represents a more in-depth examination of BF1 than does IREP, any detailed TVA response to the NRC on the BF1 IREP should be deferred until the results of the comparable portion of the BF1 PRA (estimate of core melt frequency) is available and until after the BF1 PRA systems analysts, in conjunction with BF1 systems personnel, have reviewed the IREP report against the PRA results. Based on present schedules, we would expect to provide detailed comments on IREP to NRC by May 31, 1984.

At the time we began our in-house risk assessment of BF1, the NRC funded its concurrent IREP study of BF1. It was our understanding the primary reason for this concurrent BF1 IREP was that NRC desired to use the TVA in-house BF1 PRA as a comparative tool to aid in determining if the IREP methodology does indeed identify the major contributors to core melt frequency. The core melt frequency work from the BF1 PRA must be available to accomplish this particular review task. Further, such a review of the IREP study would require extensive manpower expenditures by TVA using people involved in the BF1 PRA. Consequently, the most effective use of TVA resources in the review of the IREP report will be to defer further work on IREP until a core melt frequency for BF1 is estimated by the BF1 PRA effort of TVA. At that time, TVA will institute a detailed review of the BF1 IREP report.

8311080373 831102  
PDR ADOCK 05000259  
P PDR

A001  
1/0

Mr. Harold R. Denton

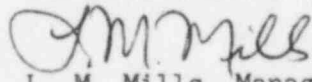
November 2, 1983

In the interim, a brief overview of the analysis and results of the IREP report has been performed independent of the risk assessment work. No TVA review of the adequacy of the IREP methodology was performed. The review has revealed that the IREP analysis contains significant errors in both the assumptions and the modeling of BF1. An example of these errors is the failure to model and analyze the correct instrumentation and control system for the residual heat removal system. The configuration analyzed in IREP contains less redundancy and consequently is less reliable than the actual configuration. Also, power supplies to various components of the residual heat removal system were incorrectly modeled. Further, some systems required by the technical specifications were omitted from the analysis causing significant misleading and overly conservative conclusions. When the detailed review is completed, the discrepancies in the IREP and their effects on the IREP conclusions will be examined.

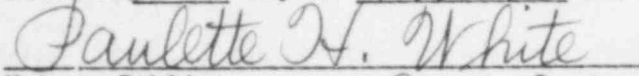
We would appreciate your holding the IREP report open and active until such time that our detailed review is complete and discrepancies resolved.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

  
L. M. Mills, Manager  
Nuclear Licensing

Subscribed and sworn to before  
me this 2<sup>nd</sup> day of November 1983.

  
Notary Public  
My Commission Expires 9-5-84

cc: U.S. Nuclear Regulatory Commission  
Region II  
ATTN: James P. O'Reilly, Regional Administrator  
101 Marietta Street, NW, Suite 2900  
Atlanta, Georgia 30303

Mr. R. J. Clark  
Browns Ferry Project Manager  
U.S. Nuclear Regulatory Commission  
7920 Norfolk Avenue  
Bethesda, Maryland 20814