

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401  
400 Chestnut Street Tower II

June 30, 1980

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

Dear Mr. Denton:

In the Matter of the ) Docket Nos. 50-259  
Tennessee Valley Authority ) 50-260  
50-296

In a May 23, 1980, letter from D. G. Eisenhut to H. G. Parris regarding the Interim Reliability Evaluation Program (IREP), we were informed that Browns Ferry unit 1 had been selected for the phase two IREP evaluations. This letter also requested TVA's intimate involvement and participation in this program.

While TVA considers IREP to be an important step forward in the systematic evaluation of the safety of nuclear power plants, the program must proceed within an orderly and logical plan of action, with each step in its turn being fully completed before continuing the next step. The IREP represents an approach to plant safety evaluation which is significantly different from past practices. Also, the methods of risk assessment itself are relatively new to the nuclear power industry and are highly sensitive to the subjective judgment of the person(s) involved in the analysis. Consequently, in order to achieve maximum benefit from the overall IREP program, this sensitivity must be reduced to a minimum. Therefore, before proceeding with this second phase of the IREP, definitive guidance should be established regarding the manner in which an IREP study should be performed.

The initial IREP study on Crystal River unit 3 was a pilot effort with the primary purpose to provide the first experience milestone in the development of an industrywide IREP study. This pilot study must be disseminated to the utilities involved in the second phase and reviewed by them before beginning with the second phase. In addition, several critical areas which TVA believes should be resolved before continuance of the program are outlined in Enclosure 1.

*Handwritten:* A001  
5-11

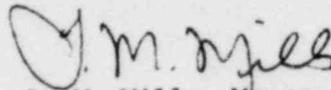
Mr. Harold R. Denton

June 30, 1980

In summary, we believe IREP is a potentially important step in determining the safety of nuclear generating stations and should be pursued. However, it is our opinion that much of the value of the program will be lost if the effort is pressed forward without bringing the initial phase to a proper conclusion. Therefore, we request that you take our comments into consideration and also allow TVA sufficient time to evaluate the Crystal River unit 3 study before proceeding with the IREP study.

Very truly yours,

TENNESSEE VALLEY AUTHORITY



L. M. Mills, Manager  
Nuclear Regulation and Safety

Enclosure

## ENCLOSURE 1

### BROWNS FERRY NUCLEAR PLANT UNIT 1 INTERIM RELIABILITY EVALUATION PROGRAM (IREP)

#### ADDITIONAL TVA CONCERNS

##### 1. Scope

The scoping criteria for IREP should provide a definition of initiating events, boundary conditions, and any sensitivity and special studies which should be performed. The techniques to be used in the analyses should be outlined.

##### 2. Consequence Evaluation

At this time the capability to determine detailed core and containment conditions during a particular accident sequence does not exist. Clear direction must be provided on how to determine the radiological releases from a particular accident sequence in order to permit consistent consequence evaluation.

##### 3. Human Factors

The specific criteria for incorporation of the human/machine interface in the analyses must be defined. This interface represents probably the area having the most overall impact on system failure probabilities and is the area most vulnerable to subjectivity and inconsistency.

##### 4. Failure Data

Sources of data should be outlined and consistent methods of application should be set forth. A decision must be made as to the extent, if any, that data error propagation should be considered. This is to prevent comparison of unequally biased numbers resulting from varying treatments of error.

##### 5. Special Topics

The decision should be made as to how special topics, such as floods and earthquakes, are to be handled in the study.

##### 6. Format

A decision must be made on how the report is to be structured, nomenclature to be used, and what results are to be presented. Without consistent format, misinterpretation and misrepresentation of the studies and their results are very probable.