

PHILADELPHIA ELECTRIC COMPANY

2301 MARKET STREET

P.O. BOX 8699

PHILADELPHIA, PA. 19101

EDWARD G. BAUER, JR.  
VICE PRESIDENT  
AND GENERAL COUNSEL

(215) 841-4000

EUGENE J. BRADLEY  
ASSOCIATE GENERAL COUNSEL

DONALD BLANKEN  
RUDOLPH A. CHILLEMI  
E. C. KIRK HALL  
T. H. MAHER CORNELL  
PAUL AUERBACH

ASSISTANT GENERAL COUNSEL

EDWARD J. CULLEN, JR.

THOMAS H. MILLER, JR.

IRENE A. McKENNA  
ASSISTANT COUNSEL

May 4, 1983

Mr. A. Schwencer, Chief  
Licensing Branch No. 2  
Division of Licensing  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

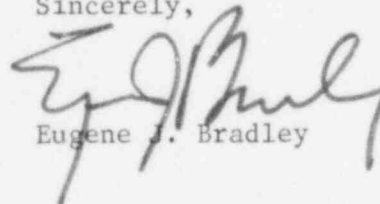
Subject: Limerick Generating Station, Units 1 and 2  
Response to TMI Items

File: GOVT 1-1 (NRC)

Dear Mr. Schwencer:

The attached documents are draft responses to TMI Items I.C.1, I.C.6, I.D.1, I.D.2, I.G.1 and III.A.1.2. These responses will be formally incorporated into the FSAR no later than June, 1983.

Sincerely,

  
Eugene J. Bradley

LN/gra/Z-13

cc: See Attached Service List

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A PDR

Boo!

cc: Judge Lawrence Brenner (w/enclosure)  
Judge Richard F. Cole (w/enclosure)  
Judge Peter A. Morris (w/enclosure)  
Troy B. Conner, Jr., Esq. (w/enclosure)  
Ann P. Hodgdon (w/enclosure)  
Mr. Frank R. Romano (w/enclosure)  
Mr. Robert L. Anthony (w/enclosure)  
Mr. Marvin I. Lewis (w/enclosure)  
Judith A. Dorsey, Esq. (w/enclosure)  
Charles W. Elliott, Esq. (w/enclosure)  
Mr. Alan J. Nogee (w/enclosure)  
Thomas Y. Au, Esq. (w/enclosure)  
Mr. Thomas Gerusky (w/enclosure)  
Director, Pennsylvania Emergency Management Agency (w/enclosure)  
Mr. Steven P. Hershey (w/enclosure)  
James M. Neill, Esq. (w/enclosure)  
Donald S. Bronstein, Esq. (w/enclosure)  
Mr. Joseph H. White, III (w/enclosure)  
Walter W. Cohen, Esq. (w/enclosure)  
Robert J. Sugarman, Esq. (w/enclosure)  
Rodney D. Johnson (w/enclosure)  
Atomic Safety and Licensing Appeal Board (w/enclosure)  
Atomic Safety and Licensing Board Panel (w/enclosure)  
Docket and Service Section (w/enclosure)

Response to I.C.1

Emergency operating procedures have been developed from the BWR Owners Group Emergency Procedure Guidelines (EPGs), Revision 2, which have been reviewed and approved by the NRC. The development of the EPGs was based on reanalysis of transients and accidents and inadequate core cooling. The licensed operator training program includes training on the emergency operating procedures.

Additional information has been provided in a letter from V. S. Boyer to D. G. Eisenhut dated April 15, 1983.

Response to I.C.6

Plant procedures will describe a system for the proper control of removal and restoration and alignment of safety-related plant systems or equipment. This system will use a combination of control room indicators, operability testing, or independent verification (subject to radiation exposure limitations) to assure that equipment is in its correct alignment.

### Response to I.D.1

The Control Room Design Review (CRDR) effort directed by Item I.D.1 and required by Supplement 1 to NUREG-0737 began in 1980 with PECO's participation in the Boiling Water Reactor Owners Group (BWROG) CRDR Subcommittee. The subcommittee produced a BWROG Generic CRDR Program which addresses Item 5.1.b of Supplement 1. This Generic Program was submitted to the NRC for review in August, 1981. The review and subsequent discussions between the NRC and representatives of the subcommittee have resulted in a supplement to the review program.

A preliminary review of the Limerick control room was conducted using the original design review program in October, 1981. At that time, the Limerick control room was still in the construction phase and the formal Limerick unique Emergency Procedures were not available for the walk-through.

PECO is currently developing a program to address the Assessment, Implementation and Verification phases of the Limerick Control Room Design Review Program.

#### BASIC REQUIREMENTS COMPLETION DATES:

(Numbering refers to corresponding portions Section S of Supplement 1)

- 5.1.a) As was the case during the initial review phase, a person competent in human factors engineering as well as persons competent in system design and system operation will be included in the assessment phase of the Program. This assessment will be completed by January, 1984.
- 5.1.b) A preliminary review of the control room has been completed as discussed in current status above. Completion of the review to address the supplemental check list, those items not included in the preliminary review due to construction status, and the Emergency Procedure Walk-through is scheduled for October, 1983. This date is contingent on NRC concurrence with the review approach used in the BWROG-CRDR program.
- 5.1.c) Assessment of the Human Engineering Discrepancies (HED's) will be completed by January, 1984.
- 5.1.d) Proposed improvements will be reviewed by the multi-disciplinary task force described in 5.1.a to assure the proposed change addresses the identified HED and does not create additional HED's. All changes will be integrated with other control room modifications. This will be completed by February, 1984.

5.2.a) The program plan for completing the Control Room Design Review is outlined below:

- i. Complete the Generic review program including the supplemental review and the emergency procedure walk-through.
- ii. Assess the identified HED's and generate recommendations for modifications to those HED's that warrant a change.
- iii. Each of the proposed modifications will be reviewed to verify that it corrects the HED it was intended to correct and does not create any new unacceptable HED's. The modifications will be coordinated with the balance of the NUREG-0737 Supplement 1 initiatives.
- iv. A summary report will be prepared to document the program actions and recommendations. It will also contain a schedule for modifications to correct the HED's.

5.2.b) A summary report will be prepared and submitted May, 1984. This will include proposed modifications and the proposed schedule. Any human factors enhancements (paint-tape-label) will be completed prior to fuel load. The modifications that require hardware changes will be scheduled according to equipment availability and start-up schedule. They may be deferred until the first refueling outage.

## Response to I.D.2

The Limerick Design includes an Emergency Response Facility Data System (ERFDS). This system is based on the General Electric Emergency Response Information System. The SPDS at Limerick will be a part of this ERFDS.

The hardware design is essentially complete with installation scheduled to begin in April, 1983. The software effort is proceeding on schedule to support system check out in August, 1983. It is expected that the system will be operational by fuel load.

The parameters included in the Safety Parameter Display System (SPDS) display are based on the entry conditions for the Limerick symptom-based emergency procedures. As changes and improvements are made to the reactor pressure vessel control and containment control procedures, the system can be modified to reflect these changes. The SPDS parameters are a subset of the parameters available in the ERFDS data base, which is based on the Regulatory Guide 1.97 Rev. 2 BWR parameter list. The system has been designed in accordance with the guidance provided in NUREG-0696.

A written safety analysis describing the basis on which the selected parameters are sufficient to assess the safety status of each identified function for a wide range of events will be available by August 1983.

Prior to fuel load, the SPDS will be reviewed in conjunction with the other NUREG-0737 supplement initiatives. As one of the final steps in integrating all of the control room modifications (i.e. Reg. Guide 1.97, SPDS, Emergency Operating Procedures), an emergency procedure walk-through is scheduled as part of the control room review.

### Response to I.G.1

The BWR Owner's Group Program for compliance with NUREG-0737 Requirement I.G.1 was transmitted to the NRC via letter (BWROG-8120) from D. B. Waters to D. G. Eisenhut. The generic program described in this document is divided into five sections: I-Preoperational Testing; II-Cold Functional Testing; III-Hot Functional Testing; IV-Startup Testing; and V-Additional Training and Testing. The initial test program for Limerick as described in FSAR Chapter 14 follows the testing described in the first four sections of the Owner's Group Program. During this program, PECO expects to perform significant plant transients only once, but with a maximum of licensed personnel in attendance. The Limerick unit unique simulator provides an excellent mechanism for training people without affecting the real plant. Repetition of startup tests solely for testing purposes will be done on this simulator.

Additional information is provided in the responses to SRAI-8 and Question 640.11.



Response to III.A.1.2

The three types of ERF's required by Section 8 will be provided for Limerick.

The Technical Support Center (TSC) will meet all of the requirements of Section 8.2.1. The TSC will be fully functional by January, 1984.

The Operational Support Center (OSC) will meet all of the requirements of Section 8.3.1. The OSC will be fully functional by January, 1984.

The Emergency Operations Facility (EOF) is located in an existing structure approximately 17 miles from the Limerick site. The EOF will meet all of the technical requirements of Section 8.4.1. The building alterations necessary for the EOF will be completed by September, 1983. The EOF will be fully functional by January, 1984.

Staffing of the EOF and the TSC is described in the Limerick Emergency Plan, Table 1.1.