

JUN 25 1982

Docket Nos.: 50-518/519/520/521  
50-553/554

MEMORANDUM FOR: The Atomic Safety and Licensing Appeal Board Panel for:  
Hartsville Nuclear Plant, Units 1-4  
Phipps Bend Nuclear Plant, Units 1 & 2

FROM: Robert L. Tedesco, Assistant Director  
for Licensing  
Division of Licensing

SUBJECT: BOARD NOTIFICATION - CONCERNS REGARDING THE ADEQUACY OF  
THE BWR PRESSURE SUPPRESSION CONTAINMENT SYSTEMS (Board  
Notification No. 82-63)

In accordance with present NRC procedures regarding Board Notifications, the attached documentation is being provided for your information as constituting new information relevant and material to safety issues. This information is potentially generic and may have applicability to all dockets with boiling water reactors which use the General Electric pressure suppression containment systems (i.e., the GE Mark I, II and III containment systems).

This matter first came to the attention of the NRC staff when Mr. John Humphrey, a former employee of GE, wrote to Mississippi Power & Light (MP&L) expressing his concerns (Attachment 1) regarding certain issues pertaining to the Mark III containment which Mr. Humphrey characterized as unresolved. In Mr. Humphrey's letter to MP&L, he indicated that many of these issues were potentially applicable to the Grand Gulf Nuclear Station (GGNS). MP&L received this letter on May 11th and provided a copy of the letter to staff on May 12th. The staff subsequently discussed this matter with Mr. Humphrey in a telephone conference on May 13, 1982; a summary of this conversation is provided in Attachment 2. In this phone conference, Mr. Humphrey indicated that one of his concerns (suppression pool stratification) might have applicability to the Perry Nuclear Power Plant (Docket Nos. 50-440/441).

MP&L and its contractors, Bechtel and GE, met with Mr. Humphrey on May 17th and subsequently informed the staff of its conclusions in a letter (Attachment 3) dated May 28, 1982, regarding the generic issues raised by Mr. Humphrey. In this letter, MP&L coalesced Mr. Humphrey's concerns into 22 categories, some of which were further subdivided into subsets.

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A meeting of all parties including the NRC staff, MP&L, Bechtel and GE, was held in Bethesda, Maryland, on May 27th to consider the applicability of the issues, raised on a generic basis, to the GGNS. A transcript of this meeting was made and is provided in Attachment 4. In this meeting, Mr. Humphrey expressed some concern about the Kuosheng facility in Taiwan with respect to a number of specific matters (e.g., drywell flooding and pool temperature stratification). Following this meeting, the staff reviewed the transcript and developed nine more specific detailed concerns (Attachment 5) which we sequentially numbered in accordance with the identification scheme developed by MP&L. (Refer to MP&L's letter of May 28th on this subject.)

MP&L submitted two additional letters (Attachments 6 and 7) on this subject, dated June 8 and June 9, 1982, in which it summarized its positions regarding Mr. Humphrey's concerns as applied to the GGNS. Briefly, MP&L concluded that none of the issues raised by Mr. Humphrey have the potential to affect the safe operation of the facility at power levels up to five percent of full power. Its basis for this conclusion is that there would be minimal risk to the health and safety of the public since the radiological source term is extremely small due to the very limited amount of fuel irradiation resulting from low power physics testing and the insignificant amount of decay heat associated with a small amount of fuel irradiation. On the basis of our telephone conference with Mr. Humphrey, our subsequent meeting on May 27th and our review of MP&L's three letters on this subject, we concluded that none of the issues raised by Mr. Humphrey were sufficiently compelling to delay issuance of a five percent power license for the GGNS; this license was issued on June 16, 1982. Attachment 8 is our summary of the May 27th meeting in which we state this conclusion.

In its letter of June 8, 1982, MP&L committed to submit by July 16, 1982, a description of its proposed program to demonstrate the conservatism in the design of the Mark III containment for the GGNS, including the adequacy of the design margins. MP&L further committed to submit a report by August 19, 1982, summarizing the progress of its proposed program.

We will continue to actively pursue this matter with all other utilities operating, constructing or proposing a facility using either a Mark I, II or III pressure suppression containment design. In this regard, we have raised this subject with representatives of the Cleveland Electric Illuminating Company at a meeting on June 17, 1982, and informed them that they should propose a program to address this subject for the Perry facility in a manner similar to that of MP&L. We have also prepared a list of specific issues related to Mr. Humphrey's concerns which we will transmit to the owners of plants with either a Mark I or Mark II containment (Attachment 9). This list was edited from the 22

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general issues identified in Attachment 3 plus the additional nine subsections contained in Attachment 5. The editing involved removing only those portions which are clearly associated with a Mark III containment. We will also transmit an unedited compilation of the 22 general issues to the owners of plants using GE's Mark III containment.

We will be able to provide you with a further assessment of this matter after receipt of additional information from the affected utilities.

Original signed by  
Robert L. Tedesco

Robert L. Tedesco, Assistant Director  
for Licensing  
Division of Licensing

Attachments:  
As stated

cc: See next page

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