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MAY 25 1984

JOHN S. KEMPER  
VICE-PRESIDENT  
ENGINEERING AND RESEARCH

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

Docket Nos.: 50-352  
50-353

Subject: Limerick Generating Station, Units 1 & 2  
Additional Information for Materials  
Engineering Branch (MTEB) Regarding  
SER Confirmatory Issue #22 - Fracture  
Toughness of Containment Pressure  
Boundary

Reference: General Design Criteria (GDC) 51 Compliance  
Audit for Limerick Units 1 and 2, conducted  
on June 24, 1983.

Enclosure: "Acceptability of 24-Inch Class 1 Feedwater  
Check Valves", Technical Report No.  
1183-05EV, Revision 2, May 1984.

File: GOVT 1-1 (NRC)

Dear Mr. Schwencer:

We are pleased to provide the enclosed report in order to address the concerns raised by J. Halapatz (NRC/MTEB) at the reference audit regarding the fracture toughness capability of the 24-inch class 1 feedwater check valves (1F074 A and B, 1F010 A and B, 2F074 A and B, 2F010 A and B).

The attached report provides documentation that these valves satisfy the acceptance criteria of GDC 51 ("Fracture Prevention of Containment Pressure Boundary") in the following three areas:

- (1) the check valve castings meet the material toughness requirements of the 1977 Summer Addenda of ASME Section III,
- (2) the permissible lowest service metal temperature was satisfactorily confirmed by available nil ductility transition temperature data, and

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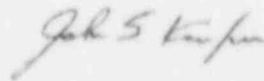
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- (3) brittle fractures are highly unlikely as indicated by a fracture mechanics analysis.

In addition, the material of these valves was demonstrated to be satisfactory by Charpy impact testing and by in-situ metallographic examination of the Unit 1 valves as described in Appendix A of the attached report.

We trust that this information will assist you in the closeout of SER confirmatory issue #22.

Sincerely,



JHA/gra/050984950

cc: See Attached Service List

cc: Judge Lawrence Brenner (w/o enclosure)  
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Judge Richard F. Cole (w/o enclosure)  
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