

HARTSVILLE AND PHIPPS BEND NUCLEAR PLANTS, ALL UNITS

USE OF NON-ASME COMPONENTS ON THE  
PRIMARY CONTAINMENT PERSONNEL ACCESS AIRLOCKS

10CFR50.55(e) REPORT NO. 3 (FINAL)

NCR-CHT/PB-78-1

On October 6, 1978, TVA notified NRC-OIE Region II, Inspector T. E. Burdette, of a potentially reportable condition under 10CFR50.55(e) regarding the use of non-ASME Class 2 components on the primary containment personnel access airlock inflatable seal air systems. TVA submitted a first interim report on this NCR on November 2, 1978, and a second interim report on February 15, 1979. This is the final report on the subject reportable deficiency.

Description of Deficiency

As a result of a TVA review of the personnel access airlock inflatable seal air system manufactured by the W. J. Woolley Co., TVA discovered that Woolley's present design and fabrication of certain pneumatic components of the inflatable seals of the personnel access airlocks do not meet ASME Section III, Class 2, requirements. GESSAR section 3.2.3.2, table 3.2.2 and table 3.2.3, require that the airlocks be designed and fabricated in accordance with ASME Section III, Subsections NC or NE Class 2 requirements.

The extent of the use of non-ASME components on the personnel airlocks was identified. A meeting was held on November 1, 1978, among TVA, GE/C. F. Braun Company (the technical engineer) and the W. J. Woolley Company to discuss all aspects of this NCR. This meeting resulted in a December 4, 1978, letter to TVA from the W. J. Woolley Company explaining their position on this matter. TVA, by letter of March 29, 1979, directed the W. J. Woolley Company to proceed to design and fabricate the pneumatic systems on the personnel airlocks incorporating the requirements of ASME Section III, Subsection NC Class 2.

Cause of Deficiency

The W. J. Woolley Company states that the cause of the deficiency was due to their interpretation of the technical engineer's (General Electric) specification 300-13 (through revision 6) and to their past experience in furnishing similar components to licensed nuclear plants and nuclear plants now under construction.

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#### Safety Implications

Had the deficiency gone undetected, the personnel airlocks would have contained components which could have malfunctioned during accident conditions resulting in a loss of containment integrity.

#### Corrective Action

The W. J. Woolley Company has been directed to redesign and refabricate the airlock systems to include ASME Class 2 components as required. The W. J. Woolley Company has submitted the redesign for approval. The redesign is presently under review by the technical engineer and TVA. The final approved design will include ASME class 2 components in the personnel access airlocks as required. Documentation received with the fabricated airlocks will be reviewed to ensure that all design requirements have been met.

#### Means Taken to Prevent Recurrence

Since the discovery of this deficiency, the following actions have been taken:

1. The technical engineer, TVA, and the W. J. Woolley Company have participated in meetings to review the contract and specification requirements.
2. The technical engineer and the W. J. Woolley Company have participated in the technical meetings to review W. J. Woolley's technical design.
3. The technical engineer and TVA have committed to a closer review of the W. J. Woolley design on a continuing basis.

These actions should prevent recurrence of this type of problem on personnel access airlocks manufactured by the W. J. Woolley Company for the Hartsville and Phipps Bend Nuclear Plants.