



**GULF STATES UTILITIES COMPANY**

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January 22, 1985  
RBG- 19,937  
File No. G9.5, G9.8.6.2

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

Dear Mr. Denton:

River Bend Station - Unit 1  
Docket No. 50-458

The enclosed revision to FSAR Section 3.8.2.7.1.1 supercedes Gulf States Utilities Company's (GSU) November 21, 1984 letter to your office regarding the initial structural acceptance test of the containment vessel. This revision will be included in a future FSAR Amendment.

Sincerely,

*William J. Booker*  
for J. E. Booker  
Manager - Engineering  
Nuclear Fuels & Licensing  
River Bend Nuclear Group

*JEB*  
JEB/RJK/je

Attachments

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Shield Building

The construction of the equipment hatch, personnel doors, and dome ventilation opening does not require any special construction techniques.

## 3.8.2.7 Testing and Inservice Inspection Requirements

Two types of tests are performed on the primary containment structure: acceptance test and leakage rate test. The acceptance test (Section 3.8.2.7.1.1) is conducted to verify the structural adequacy of the primary containment.

## 3.8.2.7.1 Containment Vessel

## 3.8.2.7.1.1 Testing

Structural Acceptance Test

The containment vessel is subjected to a pressure test in accordance with the requirements of Subsection NE-6300 of ASME III, July 1, 1974 edition.

The containment vessel is internally pressurized in levels up to a test pressure of 1.15 times the design pressure and then depressurized to the design pressure. At the design pressure, the containment vessel is examined for leakage as described below.

Prior to performing the pressure test, the following requirements are required to be completed to ensure structural integrity:

1. The containment vessel floor liner plate seam welds are pressure tested to 20 psig using the leak chase channel system.
2. The containment vessel seam welds are volumetrically examined by either radiography or ultrasonic methods in accordance with ASME III, Subsection NE-5000.
3. The containment vessel seam welds in the concrete fill area are vacuum box tested prior to being embedded in concrete.

The acceptance criterion for examination of the containment vessel during the pressure test is to examine for leakage the weld joints at major discontinuities and all regions of high stress, such as regions around openings and

thickness-transition sections. The pressure test is intended to uncover any evidence of structural deterioration which may affect either the containment structural integrity or leaktightness. Any leaks detected are repaired, and the system is retested prior to conducting Appendix J, Type A leakage testing.

~~Since the containment vessel is not code stamped witnessing by an authorized nuclear inspector is not scheduled.~~

#### Leakage Rate Test

The leakage rate test is described in Section 6.2.6.

#### 3.8.2.7.1.2 Inservice Inspection Requirements

Inservice surveillance requirements have not yet been defined by ASME Section XI Code, but they are now under development.

#### 3.8.2.7.2 Penetrations

##### 3.8.2.7.2.1 Testing

#### Piping System Penetrations

Unsleeved and sleeved piping system penetrations are tested in conjunction with the containment vessel acceptance test. Process pipe is capped off if necessary for the containment vessel structural acceptance testing.

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for Section 3.8.2.7.1.1

The containment vessel is subjected to an acceptance test which increases the containment's internal pressure in accordance with NE-6314. At each level during pressurization, the pressure is held constant for 10 minutes minimum. The concrete fill in the containment/shield building annulus is not subjected to a structural acceptance test because the stresses and strains in the concrete are calculated to be insignificant under test pressure load.

The acceptance criteria for the initial structural acceptance test is as described in ASME III, Subsections NE-6300 and NE-6315. The test requires examination of all joints, connections, and high-stress regions after the application of pressure, equal to the greater of the design pressure or  $3/4$  of the test pressure determined in accordance with NE-6320, for a period of at least 10 minutes. Any leaks detected are repaired, and the system is retested in accordance with the same requirements.

The containment vessel design incorporates a steel shell attached to a concrete floor. Concrete structures are not covered in ASME III Division 1, and therefore the vessel is not code stamped.