



**GULF STATES UTILITIES COMPANY**

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May 13, 1985  
RBG- 20,999  
File Nos. G9.5, G9.32,  
G9.19.2

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

In response to a Nuclear Regulatory Commission letter dated February 27, 1985 from Mr. A. Schwencer to Mr. W. J. Cahill, Jr., Gulf States Utilities Company (GSU) provided the requested information concerning TMI Action Item II.K.3.28, "Verify Qualification of Accumulators on Automatic Depressurization System Valves" with our letter of April 9, 1985 (RBG-20644). Pursuant to our discussions with your Staff concerning their review, the attached supplemental information is provided (Attachment 1). Where indicated, changes to the RBS Final Safety Analysis Report will be included in a future amendment (Attachment 2).

Sincerely,

*J. E. Booker*

J. E. Booker  
Manager-Engineering,  
Nuclear Fuels & Licensing  
River Bend Nuclear Group

JEB/ERG/je

Attachment

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Attachment 1

- Item 1 Each Penetration Valve Leakage Control System (PVLCS) compressor delivers 60 SCFM of air at 120 psig operating pressure to its individual accumulator, as indicated in FSAR 9.3.6.2.2 (A typographical error in our previous transmittal, RBG-20644, indicated 50 SCFM.)
- Item 3 The PVLCS is manually actuated approximately 20 min after a LOCA. Prior to the manual actuation, the system, in an automatic mode, maintains the accumulator at a preset pressure. Following a loss of off-site power, the PVLCS initiation is delayed to avoid overloading due to starting currents. The ADS accumulators are designed and maintained with sufficient inventory to permit the required actuations during this period, assuming a leakage of 1 SCFH.

FSAR Section 9.3.6.3.1 currently indicates the PVLCS accumulators are maintained with enough air to meet all short-term requirements of the PVLCS, the MS-PLCS, and the main steam safety/relief valve system.

## RBS FSAR

two per injection line). Higher pressure injection lines have two check valves in series. The high pressure feedwater injection header also has two isolation valves in series. The outboard system is equivalent to the inboard system.

11 | The MS-PLCS injection valves remain closed and do not place  
17 | any demands on the PVLCS air compressors. However, the main  
steam safety/relief valves' associated accumulators may draw  
air from the PVLCS accumulators if their associated SVV  
compressors are unavailable. Refer to Section 5.2.2.4 for  
the operation of the SVV compressors. Pressure transmitters  
maintain the PVLCS accumulators at a predetermined set  
point, at which the accumulators maintain enough air to meet  
all short-term requirements of the PVLCS, the MS-PLCS, and  
the main steam safety/relief valve system. An automatic  
start is provided for the air compressors to recharge the  
accumulators above the minimum set point as determined by  
the pressure transmitters.

## 9.3.6.3.2 Design Basis Operation

Approximately 20 min after it has been ascertained that a  
LOCA has occurred, the PVLCS is actuated. ~~The 20 min time  
period prevents the standby power supplies from being  
overloaded due to the starting current drawn by the PVLCS  
air compressors and motor operated valves, adding to the  
starting current of other safety related items.~~ The 20-min  
time period also serves as sufficient time for the reactor  
vessel pressure to decay to a pressure at which the PVLCS  
can function. The air line pressure at the injection point  
to the process line valves is 1.1 times that of the reactor  
drywell pressure. In addition, the leakage of fission  
products during the 20-min period is insignificant with  
respect to 10CFR100 guidelines.

Upon initiation, the injection valves and isolation valves  
must be manually opened (remote manual initiating switch).  
The valves have interlocks that prevent leakage of any  
process line fluid upstream of the valves (Section 9.3.6.5).

If, 5 min after initiation, high flow or low pressure is  
detected in one system, that system automatically isolates  
and the other system provides the seal. High flow and low  
pressure indicate that the process line valve is stuck open  
or partially open, or the system no longer maintains system  
integrity. Low pressure (sensed downstream of the isolation  
valve) by itself indicates that an injection valve or  
isolation valve has failed to open, or that the compressor  
is not operating correctly. The compressor is equipped with  
suitable instrumentation to detect and annunciate failures.