



GULF STATES UTILITIES COMPANY

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RBG- 21,037

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

Attached is Gulf States Utilities' (GSU) supplemental response to the NRC Staff's position regarding the River Bend Station (RBS) Drywell/Containment Purge System. The Staff position is identified in the Safety Evaluation Report (NUREG-0989) Section 6.2.4.3 as Confirmatory Issue No. 18.

This response supplements GSU's transmittals to you dated November 8, 1984 (RBG-19385) and January 31, 1985 (RBG-20025). No FSAR revisions have been identified as required at this time.

Sincerely,

J. E. Booker

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

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Attachments

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Attachment 1

1. STAFF POSITION

Continuous containment purging through large diameter valves will not be allowed. We will require the applicant to develop appropriate interim guidelines that will establish provisions for a reduction in the use of the containment purge system. These guidelines will consider limitations on airborne activity levels to satisfy the as low as reasonably achievable (ALARA) levels and overall containment air quality in determining when use of the purge system is not needed. The interim guidelines shall be furnished to the NRC staff six months before the initial fuel load data.

RESPONSE

As indicated in our letter of November 8, 1984, GSU's analyses to estimate the number of hours that containment purge would be required was based on design basis source terms. The use of "best estimate" source terms could reduce the estimated number of required hours of purging to a range with an upper bound of approximately 2000 hours. However, Gulf States Utilities understands the Staff to be agreeable to evaluation of a Technical Specification change if projections indicate that additional hours may be required. To facilitate the NRC Staff's request for a reduction in the use of containment purge, Gulf States Utilities will minimize the use of the containment purge system in Modes 1-3 pursuant to following guidelines:

- a. When a group of individuals is to make a planned entry into primary containment, purging may be initiated* to maintain the measured airborne activity level to less than or equal to 25% of the Maximum Permissible Concentration (MPC) for all radio nuclides throughout the personnel entry. When all individuals have exited the primary containment, the purge may be terminated.

* If the measured MPC level is at or below 0.25 MPC just prior to entry, containment purge may not be necessary.

- b. If an individual(s) is required to enter primary containment for a special task that could not be anticipated, the individuals total MPC-hours for the day will be projected for the estimated number of hours to be spent in containment and the airborne activity concentrations expected during the entry. If the individuals total MPC-hours for the day is not expected to exceed 2.0, a purge of primary containment will not be required. If the projected MPC-hours do exceed 2.0, two options for limiting internal exposure are available: i) containment purge; or ii) use of respiratory protective equipment. Use of the options will be determined through evaluation of the number of individuals to enter primary

containment, expected duration of the entry, impact of respiratory protective equipment on the task(s) to be performed, and available purge time.

As part of the containment access management program required by the Staff Position below (No. 3), all planned work for a shift will be scheduled (if possible) to be performed to minimize the required purging time. If airborne levels increase significantly during the purge, individuals in the primary containment are evacuated until the situation can be evaluated.

6. STAFF POSITION

The drywell supply and exhaust isolation valves shall be normally closed during Modes 1 through 3 except:

- a. To accommodate drywell pressure control or reduce drywell activity levels in Operating Mode 3, the applicant shall limit use of the drywell purge system to 90 hours per year (cumulative) for Operating Mode 3.
- b. To accommodate the need for drywell pressure control during Operating Modes 1 and 2.
 - (1) Either the exhaust or supply lines of the drywell purge system may be opened, but both lines shall not be opened at the same time,
 - (2) While venting the drywell, the containment shall not be vented or purged, and
 - (3) The total time of venting the drywell shall be limited to five hours per year (cumulative) for Operating Modes 1 and 2. This restriction will be withdrawn upon receipt and NRC approval of analyses to demonstrate acceptable consequences on the containment structure and the enclosed equipment following onset of the most limiting primary system break during use of the drywell purge system.

RESPONSE

GSU's response to this position is as stated in our letter of January 31, 1985, with the following supplemental information. The Staff's position states that the operational restriction of 5 hours per year on use of the drywell purge system will be withdrawn upon NRC approval of analyses to demonstrate acceptable consequences. Toward this end, GSU is currently proceeding in an endeavor to qualify the 24" butterfly drywell purge valves to close against the most limiting LOCA pressure against which they could be required to close.

Until this qualification is complete and accepted by the NRC, GSU will install actuator limit stops restricting the valves to no more

than a 50-deg opening. This restriction provides added confidence that the valves will close should they be so required. However, GSU has determined the probability of a LOCA while purging the drywell in Modes 1 or 2 to be less than 6×10^{-12} . We believe the above commitments along with those of our January 31, 1985 letter, combined with the low probability of the postulated event, warrant approval of the use of the drywell purge system limited to five hours per year (cumulative).

Please advise GSU as soon as possible regarding the acceptability of drywell purge operation under these restrictions so that hardware and procedure modifications can be implemented.