



GULF STATES UTILITIES COMPANY

RIVER BEND STATION POST OFFICE BOX 220 ST. FRANCISVILLE, LOUISIANA 70775

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October 17, 1990
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U.S. Nuclear Regulatory Commission
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Washington, D.C. 20555

Gentlemen:

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

On August 22, 1990 Gulf States Utilities (GSU) Company filed an application to amend the River Bend Station - Unit 1 Technical Specifications, Appendix A to Facility Operating License NPF-47, pursuant to 10CFR50.90. That application was filed to change Technical Specification Table 3.3.2 and 3.3.7.4 to remove the steam condensing mode of residual heat removal (RHR) system from the license and was based on a modification which will be installed during the current refueling outage at River Bend Station scheduled to end on November 25, 1990.

This letter revises that application. The proposed changes to the Technical Specifications remain as were submitted in the August 22, 1990 letter; this revision provides only a different, but basically technically equivalent, justification for the requested changes. The initial submittal was based on a design to install welded plugs in the steam supply lines to the RHR heat exchangers in the steam tunnel upstream of the steam supply inlet valves. Upon final walkdown of that design after shutdown for the outage, it was determined that doing this work in the steam tunnel would create undesirable man-rem exposure levels. It became prudent to redesign the modification to allow the work to take place in the auxiliary building with significantly lower exposure levels. As a result, the welded plugs were replaced with bolted blind flanges at the location of the steam supply inlet valves. The end result of permanently blocking off the steam supply lines remains the same, only now this is to be done at a different location in the steam lines using bolted blind flanges instead of welded plugs. This change, as revised, does not impact the existing high energy line break (HELB) analysis; the analysis remains as currently documented in the RBS USAR.

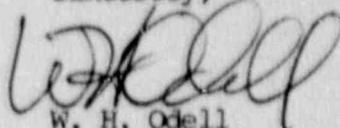
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The Attachment to this letter provides the detailed justification for the proposed revisions to the Technical Specifications.

Your prompt attention to this application is appreciated.

Sincerely,



W. H. Odell
Manager, Oversight
River Bend Nuclear Group

W/O/SAE/LLD/OMB/ns

Attachment

cc: U. S. Nuclear Regulatory Commission
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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

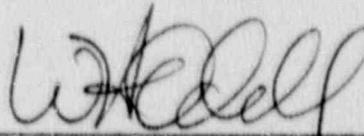
STATE OF LOUISIANA)
PARISH OF WEST FELICIANA)
In the Matter of)
GULF STATES UTILITIES COMPANY)

Docket No. 50-458

(River Bend Station - Unit 1)

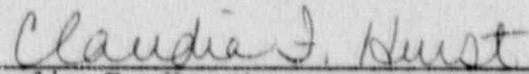
AFFIDAVIT

W. H. Odell, being duly sworn, states that he is a Manager - Oversight for Gulf States Utilities Company; that he is authorized on the part of said company to sign and file with the Nuclear Regulatory Commission the documents attached hereto; and that all such documents are true and correct to the best of his knowledge, information and belief.



W. H. Odell

Subscribed and sworn to before me, a Notary Public in and for the State and Parish above named, this 17th day of October, 1990. My Commission expires with Life.



Claudia F. Hurst
Notary Public in and for
West Feliciana Parish, Louisiana

ATTACHMENT
(LAR90-16 Rev.1)

On August 22, 1990 GSU submitted a request (RBG-33430) to remove the steam condensing mode (SCM) of the residual heat removal system (RHR) from the license. The design described at that time was to install a welded plug in the RHR line located in the steam tunnel, disable the associated valves and remove the technical specification requirements on the controls. That change was requested to be reviewed by the NRC prior to startup from the current refueling outage scheduled for completion by November 25, 1990. After shutdown on September 29, 1990 final walkdown of the design identified radiation fields and construction details which made the original design impractical. Following re-evaluation, a new design was identified which will accomplish all the original design objectives with an ALARA reduction in construction details. This revision will change the use of welded plugs to bolted blind flanges and will change the location of this barrier from the steam tunnel to the auxiliary building at the current location of the 1E12*MOV52A and B valves. The valves themselves will be removed. The changes to the August 22, 1990 submittal are discussed below.

The change to the original modification request to permanently disable the SCM of the RHR system will remove the RHR steam supply valves (1E12*MOV52A and B) and install ASME III, Div. I bolted blind flanges in the steam supply lines to the RHR heat exchangers. These flanges are to be located in the auxiliary building and are located on negatively sloped lines which ensure that piping designed for steam service does not fill with water. The following valves will be electrically or pneumatically disabled as originally identified and discussed:

1E12*MOV026A and B	disabled
1E12*MOV087A and B	disabled
1E12*PVF051A and B	disabled

The level control valves, 1E12*LVP055A and B, are used when flushing RHR piping to the suppression pool prior to placing RHR in the SDC mode; these valves will not be disabled but the controls will be replaced with manual set stations which are more appropriate for their function in future operations. In addition to disabling or removing the valves listed above, all unnecessary control switches associated with these valves will be removed from the main control room. For valves 1E12*MOV052A, B and 1E12*MOV026A, the controls from the remote shutdown panel (RSP) will be removed or spared in place. The removal of these controls and the justification remains as originally discussed and continues to necessitate the administrative removal of these valves from the referenced technical specifications.

As a result of the relocation of the barrier the new design will maintain the high energy line break (HELB) in the auxiliary building. This is the only accident involving the SCM of RHR analyzed in the SAR. The blind flanges being installed in each of the two steam supply lines to the RHR heat exchangers will be located in the auxiliary building. Based on the location of the flanges, there is no change to the HELB analysis as documented in the SAR. The probability of a HELB in the auxiliary building will not increase because the installed blind flanges will be constructed to the same quality requirements as the original piping.

The steam line pipe supports were reviewed and will be modified as required to ensure that the seismic response of the system would not be impacted by the decrease in weight resulting from the removal of the valves and addition of the blind flanges. As a result, installing blind flanges in place of the existing valves will preserve the existing seismic analysis. The blind flanges are also located so as to ensure that piping designed for steam service does not fill with water. Only a break just upstream of the blank would result in a HELB in the auxiliary building. The break would be located immediately outside the steam tunnel which is an event already analyzed in the SAR.

As discussed in the original submittal, the radiological consequences of an MSIV isolation event as analyzed in SAR Section 15.2.4.2 did not take credit for the SCM of RHR being placed in service. Since no credit is taken for the SCM of RHR, the elimination of this mode of operation will not affect the consequences as reported in SAR 15.2.4.5 for the isolation event.

Technical Specification (TS) 3/4.3.7.4 provides the operability requirements for the controls and instruments located on the remote shutdown panel. TS Table 3.3.7.4-2 provides a list of controls on the remote shutdown panel which are required to be operable during Operational Conditions 1 and 2. Since these valves will be disabled or removed, the inclusion of their control switches on the RSP and in the Technical Specifications is no longer required. GSU continues to request that the following controls be deleted from TS Table 3.3.7.4-2:

- Item 28. RHR Hx Flow to RCIC MOV (1E12*MOV026A)
- Item 35. RHR Steam Isolation MOV (1E12*MOV052A, B)

GSU continues to propose the double asterisks (**) be removed from TS Table 3.3.2-2, that the associated note be deleted and that the existing setpoints be retained as the final setpoints.

In summary, the proposed changes continue to be evaluated as safe and desirable based on the following:

1. The existing RHR/RCIC High Steam Flow trip setpoint is acceptable and will continue to isolate the steam supply line.
2. Design, fabrication, and installation of the blind flanges meets the requirements of ASME Code.
3. SKV cycle analysis has been performed and found to match the current value given in the USAR.
4. SCM of RHR is not a Technical Specification requirement nor is it required to be operable to support any other system.
5. The SCM of RHR is not required by the USAR to support any transient or accident analysis. Its deletion will not affect the safe shutdown of the plant or the capability to maintain the plant in a safe shutdown condition.

NO SIGNIFICANT HAZARDS CONSIDERATION:

In accordance with the requirements of 10CFR50.92, the following discussions are provided in support of the determination that no significant hazards are created or increased by the change proposed in this submittal.

1. The proposed change would not significantly increase the probability or consequences of an accident because:

The only accident involving the steam condensing mode of RHR is the high energy line break (HELB) in the steam tunnel and auxiliary building. Valves 1E12*MOV052A and B will be replaced by blind flanges in the steam supply lines to the RHR heat exchangers. With the proposed location of the blind flanges, a HELB in the auxiliary building due to the rupture of steam line to the RHR heat exchangers is unchanged from that originally contained in the SAR. The HELB of the steam lines in the steam tunnel and of the RCIC steam supply line in the auxiliary building have also been previously evaluated and this analysis is not affected.

The HELB of the steam supply line is terminated by the closure of the containment isolation valves 1E51*MOV063 and 064. This modification does not affect the operability of these valves or associated instrumentation. GSU has re-evaluated the setpoint of the RHR/RCIC steam line flow-high isolation instrumentation and concluded that the existing setpoint is adequate. This conclusion is based upon the mass and energy release calculations for steam line breaks in the steam tunnel and auxiliary building. Calculations indicate that for a break of the 4" RCIC steam supply line in the auxiliary building, the existing trip setpoint would be exceeded within 0.1 seconds after the break and that flow would be terminated by closure of the containment isolation valves within 12 seconds. Lowering the existing setpoint would not significantly increase the response time of the containment isolation valves or decrease the inventory lost through the break. All equipment in the area is qualified based on the existing setpoint and calculated inventory loss. No increase in offsite release rates in excess of those previously calculated would occur as a result of maintaining the existing setpoint. Based upon the above GSU concludes that the current setpoint of 60.7 inches H₂O is adequate and should become the permanent setpoint.

The blind flanges will be fabricated and installed to the same quality requirements as the original piping. Also the steam line piping supports were reviewed for the decreased weight and will be modified to ensure the seismic adequacy of the line. The blank flanges have been located on negatively sloped lines which ensure that piping designed for steam service remains drained.

Valves 1E12*MOV052A, 1E12*MOV052B, and 1E12*MOV026A were identified in the Fire Hazards Analysis as valves that must not spuriously reposition during a fire event. To ensure that these valves could be placed in the correct position during a fire event, control switches for these valves were included on the remote shutdown panel. Spurious repositioning of 1E12*MOV052A or B could result in an interfacing system LOCA (Wash 1400, Event V). Spurious repositioning of 1E12*MOV026A could result in an overpressurization of the RCIC pump suction piping. With the implementation of this modification the above events are no longer possible. The blind flanges in the RHR steam supply lines remove the possibility of the interfacing system LOCA. Electrically disabling 1E12*MOV026A ensures that the valve can not spuriously open during a fire event.

A review of the transient analyses (Chapter 15 of the SAR) indicates that no credit has been taken for the SCM including the radiological consequences of an MSIV isolation event as analyzed in SAR. Section 15.2.4.2 did not take credit for SCM of RHR. Therefore, the elimination of this mode of operation will not affect the radiological consequences as reported in the SAR Section 15.2.4.5 for the MSIV isolation event.

The only analysis which may be impacted by the permanent disabling of SCM is the number of main steam SRV cycles following an MSIV isolation. The SRV cycle analysis has been performed assuming that the SCM is unavailable. The value obtained is not greater than the current value of 15 used in section A.6A.9 of the SAR.

It is, therefore, concluded that this modification does not involve a significant increase in the probability or consequence of an accident.

2. The proposed change would not create the possibility of a new or different kind of accident from any previously evaluated because:

The design, fabrication and installation of the blind flanges will be to the same requirements as the original piping (ASME III, Div. I). The blind flanges have been located so as to ensure that piping designed for steam service does not fill with water. Measures have been taken to ensure that the piping designed for steam service remains drained. No new or different relationships or interfaces with other systems or components have been created which could result in a new or different type of accident.

3. The proposed change would not involve a significant reduction in the margin of safety because:

There are no Technical Specification requirements for the SCM of RHR to be operable. Also, this mode is not a requirement for any other system required to be operable per the Technical Specifications.

Technical Specification Section 3/4.3.2, "Isolation Actuation Instrumentation," specifies that the RHR/RCIC steam line flow-high trip setpoint be less than or equal to 60.7 inches of water. This setpoint has been evaluated based on an RCIC line break maximum flow with the SCM of RHR disabled. A review of the mass and energy release calculations for a break of the 4" RCIC steam supply line in the

auxiliary building indicates that the containment isolation valves would perform their function within the same time frame as previously analyzed. There would be no increase in offsite release rates. Environmental conditions in the RCIC steam line areas are not affected.

Based on the above it is concluded that the margins of safety as defined in the basis of the Technical Specifications is not affected. In conclusion the proposed change does not increase the probability or consequences of a previously evaluated accident nor will it create a new or different type of accident.