



**GULF STATES UTILITIES COMPANY**

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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

Gulf States Utilities (GSU) Company hereby files an amendment to the River Bend Station Unit 1 Facility Operating License NPF-47, pursuant to 10CFR50.90. This application is filed to provide additional action requirements to Technical Specification 3.1.3.1 to be met in the event the Scram Discharge Volume vent and/or drain valves become inoperable. The attachment to this letter includes the proposed revisions to the Technical Specifications and justifications for this change.

Pursuant to 10CFR170.12, GSU has enclosed a check in the amount of one hundred fifty dollars (\$150.00) for the license amendment application fee. Your prompt attention to this application is appreciated.

Sincerely,

J. C. Deddens  
Senior Vice President  
River Bend Nuclear Group

JCD/LAE/ROR/DAS/ch

Attachments

cc: U.S. Nuclear Regulatory Commission  
611 Ryan Plaza Drive, Suite 1000  
Arlington, TX 76011

Mr. Walt Paulson, Project Manager  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

NRC Resident Inspector  
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Nuclear Energy Division  
Louisiana Dept. of Environmental Quality  
P.O. Box 14690  
Baton Rouge, LA 70898

*Foot w/ check \$150 #2599*

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

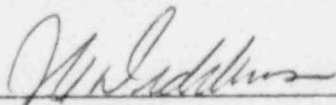
STATE OF LOUISIANA )  
PARISH OF WEST FELICIANA )  
In the Matter of )  
GULF STATES UTILITIES COMPANY )

Docket No. 50-458


(River Bend Station - Unit 1)

AFFIDAVIT

J. C. Deddens, being duly sworn, states that he is a Vice President of 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.

  
\_\_\_\_\_  
J. C. Deddens

Subscribed and sworn to before me, a Notary Public in and for the State and Parish above named, this 31<sup>st</sup> day of May, 19 88. My Commission expires with Life.

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

ATTACHMENT

GULF STATES UTILITIES COMPANY  
RIVER BEND STATION  
DOCKET 50-458/LICENSE NO. NPF-47

Scram Discharge Volume Vent and Drain Valves

ITEM: 3.1.3.1

PAGE: 3/4 1-4

REASON FOR REQUEST:

Currently, the Standard Technical Specifications and River Bend Station Technical Specification 3/4.1.3.1 provides surveillance requirements for demonstrating the scram discharge volume (SDV) vent and drain valves operable. However, these Technical Specifications do not provide ACTION requirements to be met in the event these components become inoperable. This proposed amendment would provide additional ACTION requirements to Sections 3/4.1.3.1(d), (e) and (f) to be met in the event these components become inoperable. This proposed amendment follows the action statements previously approved on the Grand Gulf docket.

DESCRIPTION:

Water displaced by the control rod drive pistons during a scram is diverted to the SDV. The purpose of the SDV vent and drain lines is to direct the water from the SDV to the containment equipment drain sumps following a scram. As indicated in USAR Section 4.6.1.1.2.4.2.3, the River Bend Station design complies with the criteria enumerated in the Generic Safety Evaluation Report-BWR Scram Discharge System, as indicated in the Licensing Review Group (LRG)-II position 1-ASB. As such, the design employs redundant valves on each SDV vent and drain line. These valves remain open during normal plant operation to allow operational leakage from the scram system to drain from the SDV to the containment equipment drain sumps. The vent and drain valves automatically close upon the receipt of a scram signal to isolate the SDV and prevent the discharged reactor coolant from being released to the containment during a scram. Additionally, these valves close under loss of air and/or electrical power. This redundant design assures that no single active failure can result in an uncontrolled release of reactor coolant to the containment.

In the event that the SDV fills with water such that insufficient capacity remains for the displaced water, control rod movement during a scram would be hindered. To prevent this situation, the reactor is automatically scrammed when the water level in the scram discharge instrument volume is high enough to verify that the SDV is filling up, yet low enough to ensure that the remaining capacity in the SDV can accommodate a scram. This assures that the minimum volume of 3.34 gallons per control rod drive remains available to accommodate a scram. High water level in the scram discharge instrument volume is detected with redundant and diverse instrumentation (i.e., float switches and level transmitters).

Technical Specification 3/4.1.3.1 provides the operability requirements and surveillance requirements for the SDV. Surveillance Requirements 4.1.3.1.1 and 4.1.3.1.4 provide for the demonstration of operability for the SDV by testing the SDV vent and drain valves. However, should any of these vent or drain valves become inoperable, there are currently no ACTION requirements provided. This proposed amendment would add ACTION requirements which are similar to those previously approved on the Grand Gulf docket.

Proposed Action (d) provides steps to be taken when one SDV vent and/or drain valve is inoperable and open. As stated above, during normal operation, the SDV is vented and drained to the containment equipment drain sump through a vent line and a drain line. Each vent and drain line contains two valves in series which are actuated to close upon a scram, thus allowing the control rod drive effluent to be contained in the SDV. With only one SDV vent and/or drain valve inoperable, the remaining operable redundant SDV vent and/or drain valve would be capable of automatic isolation. Therefore, the isolation capability of the SDV is not adversely affected. The provisions of proposed Action (d) allows 24 hours to find and correct the problem. The proposed Action (d) will conform to that of the Perry Plant, Clinton Plant, and Grand Gulf.

Proposed Action (e) provides steps to be followed if two SDV vent and/or drain valves are found to be inoperable and open. In the event of a scram while operating in this condition, reactor coolant would be released to the containment equipment drain sumps. However, this effluent would still be contained within the primary containment. Reactor vessel makeup water would be assured from either the condensate and feedwater system or the high pressure core spray system. The proposed Action (e) includes requiring having one vent valve and one drain valve operable within 8 hours. The proposed action further requires restoring all valves to operable status within the next 16 hours or closing at least one vent valve and one drain valve and being in at least hot shutdown within the next 12 hours. The provisions of proposed Action (e) are more restrictive than the proposed Action (d) where only one vent and/or drain valve is inoperable and open. The 8 hour time for restoration of one vent and drain valves allows time to identify the problem and effect some repairs but does not allow excessive out of service time. The 16 hour restoration requirement for the remaining inoperable vent and/or drain valves is consistent with proposed Action (d) since all vent and drain valves would be required to be made operable within 24 hours.

Proposed Action (f) provides the required actions to be taken when the SDV vent and/or drain valves are found inoperable but closed. The proposed action would require all valves to be restored to operable status within 8 hours or be in at least hot shutdown within the next 12 hours. In the event of a scram while operating in this condition, the inoperable SDV vent and drain valves are in their preferred position. When there is no scram and the inoperable valves are closed, water will accumulate in the SDV. Although this condition may initiate a reactor scram, the valves are in their preferred closed position. As stated above, the redundant and diverse SDV water level instrumentation and automatic reactor scram will ensure adequate SDV volume will remain to accept the water displaced during a scram while operating in this condition. The proposed Action (f) is

conservative by allowing only 8 hours for restoration of the operability of the SDV vent and drain valves to limit the length of time operational leakage is allowed to accumulate in the SDV. Therefore, the safe shutdown capability of the plant would not be adversely affected.

SIGNIFICANT HAZARDS CONSIDERATION:

In accordance with the requirements of 10CFR50.92, the following discussions are provided to the NRC Staff in support of "No Significant Hazards Considerations."

- I. The change proposed by this submittal does not involve a significant increase in the probability or the consequences of a previously evaluated accident because:

The proposed Action (d) provides "additional" action requirements to be met in the event of one SDV vent and/or one SDV drain valve is found inoperable and open. In this configuration, at least one vent and one drain valve are capable of automatically closing on a scram signal to provide the required isolation function. The 24 hours allowed by this proposed action requirement allows sufficient time to find and correct the problem without requiring the unit to shutdown unnecessarily when the isolation function is still capable of being performed.

The proposed Action (e) provides "additional" action requirements to be met in the event that two SDV vent and/or two SDV drain valves are found inoperable and open. In this configuration, the isolation function of the SDV cannot be performed. Therefore, a more restrictive 8 hours are proposed to allow time to find and correct the problem. In the event of a reactor scram while operating in this configuration, reactor coolant would be released to the containment equipment drain sumps. However, this effluent would still be contained within the primary containment. Adequate reactor vessel makeup would be available from either the condensate and feedwater systems or the high pressure core spray system. Therefore, the safe shutdown of the unit is not adversely affected. The proposed action requirements would further require the remaining SDV vent and drain valves be restored to operable status within the next 16 hours. This is consistent with proposed Action (d) since all vent and drain valves would be required to be made operable within 24 hours.

The proposed Action (f) provides "additional" action requirements to be met in the event that any SDV vent or SDV drain valves are found inoperable and closed. In this configuration, the isolation function of the SDV is being maintained by the closed inoperable valve(s). When there is no scram and the inoperable valves are closed, water will accumulate in the SDV. Although this condition may initiate a reactor scram, the valves are in their preferred closed position. As stated above, the redundant and diverse SDV water level instrumentation and automatic reactor scram will ensure adequate SDV volume will remain to accept the water displaced during a scram while operating in this configuration. The proposed Action (f) is

conservative by allowing only 8 hours for restoration of the SDV vent and drain valves to limit the length of time operational leakage is allowed to accumulate in the SDV. Therefore, the safe shutdown of the unit would not be adversely affected. The 8 hours allowed by this proposed action allows sufficient time to find and correct the problem without requiring the unit to be shutdown unnecessarily when the isolation function of the SDV is being performed.

If any of the actions are not met within the proposed time requirements, the unit will be required to be placed in at least hot shutdown within 12 hours. This requirement is consistent with the action requirements previously approved on other Mark III BWR/6 nuclear plant dockets for Perry, Clinton, and Grand Gulf.

Additionally, this change will not result in any design or hardware changes and is within the capabilities of the current equipment. Adequate makeup capability to the reactor vessel would be available from the condensate and feedwater systems or the high pressure core spray systems in the event of a failure to isolate the SDV during a scram. Additionally, any reactor coolant released through inoperable and open SDV vent and/or drain valves would be collected in the containment equipment drain sumps and would be contained within the primary containment. Therefore, the safe shutdown capability of the unit is not adversely affected.

The small break LOCA inside containment analyses provided in Chapters 6 and 15 of the River Bend Station USAR are still bounding. As stated in Chapter 6 of the USAR, the resulting drywell temperatures are significantly lower for this type of small break LOCA than one in which blowdown flow consists of reactor steam only.

- II. The change proposed by this submittal does not create the possibility of a new or different kind of accident from any previously evaluated because:

The proposed "additional" action requirements do not result in any design or hardware changes and are within the capabilities of the current equipment. In addition, the proposed change imposes more detailed action requirements on RBS than currently required by the Technical Specifications. Adequate makeup capability to the reactor vessel would be available from the condensate and feedwater systems or the high pressure core spray system in the event of a failure to isolate the SDV during a scram. Additionally, any reactor coolant released through inoperable and open SDV vent and/or drain valves would be collected in the containment equipment drain sumps and would be contained within the primary containment. Therefore, the safe shutdown of the unit is not adversely affected.

- III. This proposal as submitted does not involve a significant reduction in the margin of safety because:

These proposed changes provide more definite action requirements for the conditions when either one or two vent and/or drain valves are inoperable.

The proposed "additional" action requirements are consistent with the provisions in other recently licensed BWR/6 plants with similar design features as River Bend. More specifically, the proposed action requirements would conform to those previously approved on the Grand Gulf docket. These additional requirements do not significantly reduce any margin of safety because the changes provide assurance that provisions are made to address the situation where one or two SDV vent and/or drain valves are inoperable without causing an immediate shutdown per the provisions of Technical Specification 3.0.3. Because these actions lead to a safe plant condition (reactor shutdown), the margin of safety is not reduced. In addition, this request does not result in a significant reduction to the margin of safety as defined in the bases of the RBS Technical Specifications.

The proposed amendment, as discussed above, has not changed the system design or function as discussed in the USAR. The proposed action requirements are consistent with other recently licensed BWR/6 plants with similar design features as River Bend. In the event of a reactor scram with the SDV incapable of performing its isolation function, adequate reactor coolant makeup would be available and the current small break LOCA analyses presented in the River Bend Station USAR would still bound this condition. Additionally, any reactor coolant released through inoperable and open SDV vent and/or drain valves would be collected in the containment equipment drain sumps and would be contained within the primary containment. Therefore, the proposed amendment will not increase the probability or the consequences of a previously evaluated accident and will not create a new or different accident. Since the proposed changes provide adequate action requirements to assure that provisions are made to address the situation where SDV vent and/or drain valves are inoperable without imposing an unnecessary operational transient associated with immediate shutdown in accordance with Technical Specification 3.0.3, the proposed change does not result in a significant reduction in the margin of safety. Therefore, GSU proposes that no significant hazards considerations are involved.

#### REVISED TECHNICAL SPECIFICATION

The requested revision is provided in the Enclosure.

#### SCHEDULE FOR ATTAINING COMPLIANCE

As indicated above, River Bend Station is currently in compliance with the applicable Technical Specification. If any SDV vent and/or drain valve becomes inoperable prior to NRC approval of this amendment request, River Bend Station will maintain compliance with the proposed action requirements.

#### NOTIFICATION OF STATE PERSONNEL

A copy of this amendment application has been provided to the State of Louisiana, Department of Environmental Quality - Nuclear Energy Division.

ENVIRONMENTAL IMPACT APPRAISAL

Revision of this Technical Specification does not result in an environmental impact beyond that previously analyzed. Therefore, approval of this amendment does not result in a significant environmental impact nor does it change any previous environmental impact statements for River Bend Station.



ENCLOSURE