



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

On June 4, 1990 (RBG-32948) 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 Specifications 4.0.5, 3.4.3.1 and 3.4.3.2 in accordance with guidance provided in Generic Letter (GL) 88-01.

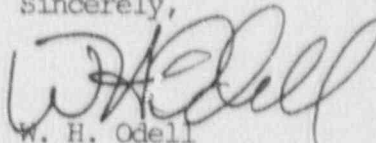
In discussions on August 27, 1990, the NRC identified concerns with the June 4, 1990 GSU submittal, most specifically with the GSU discussion on the GL 24 hour shutdown requirement upon loss of all sump flow monitoring. The NRC requested further restrictions to the ACTION requirements on the loss of unidentified drywell leakage sump flow monitoring. To resolve this issue, GSU proposes to accept the original GL 88-01 guidance. This guidance allows 24 hours as an allowable out of service time upon the loss of drywell unidentified leakage sump flow monitoring. In addition, a new action is proposed to address Limiting Condition for Operation.

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The attachment to this letter and its enclosures provide revised justifications and proposed changes to the Technical Specifications and Bases. For further information, please contact B. M. Burmeister of my staff at (504) 381-4148.

Sincerely,



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



LAE/LLD/BMB/pj

Attachment

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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)
(River Bend Station - Unit 1)

Docket No. 50-458


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 13th day of February, 1991. 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
LICENSE NPF-47

REACTOR COOLANT SYSTEM
(89-06 Rev.1)

Licensing Document:

Technical Specifications:

Items: 4.0.5
3.4.3.1
3.4.3.2

Pages: 3/4 0-3
3/4 4-10
3/4 4-11

REASON FOR REQUEST

In accordance with 10CFR50.90, SU requests a revision to the River Bend Station (RBS) Unit 1 Tec. Spec. Specifications, Appendix A to Facility Operating License NPF- This change request responds to NRC Generic Letter (GL) 88-01 dated January 25, 1988, which requires licensees with piping susceptible to intergranular stress corrosion to modify their operating licenses to place additional requirements in Specification 4.0.5 (Applicability: Surveillance Requirements) item 'f' in accordance with the staff positions included in NRC Generic Letter 88-01. The GL also requests modifications to Specification 3.4.3.1 to limit operation with the sump flow monitoring system inoperable and Specification 3/4.4.3.2 to require a shutdown when unidentified leakage increases 2 gpm in 24 hours.

DESCRIPTION

A Nuclear Regulatory Commission (NRC) study of intergranular stress corrosion cracking (IGSCC) found in BWR austenitic stainless steel piping near weldments resulted in the development of Nuclear Reactor Regulations' NUREG-0313, "Technical Report on Material Selection and Processing Guidelines for BWR Coolant Pressure Boundary Piping." Addressed during this study were NRC I&E Bulletin 83-02, "Stress Corrosion in Large-Diameter Stainless Steel Recirculation System Piping at BWR Plants." On January 25, 1988, the NRC stated their position on IGSCC in NRC GL 88-01, "NRC Positions on IGSCC in BWR Austenitic Stainless Steel Piping." The GL included the requirements to:

- I. Change the Technical Specifications to incorporate the NRC position on schedule, methods, personnel and sample expansion.

- II. Initiate a plant shutdown when any leak detection system indicates an increase of unidentified leakage in excess of 2 gpm within a period of 24 hours or less.
- III. Monitor the sump level every 4 hours when the system is a fixed-measurement-interval.
- IV. Limit outage time to 24 hours for instruments associated with each sump and then initiate shutdown.

To address these requirements GSU is proposing changes to Specifications 4.0.5, 3.4.3.1 and 3/4.4.3.2 as discussed below.

Specification 4.0.5:

An item 'f' will be added to reference the NRC recommendations included in the GL. The River Bend Station Inservice Inspection (ISI) Plan will also be revised to reference NRC GL 88-01 and incorporate the staff's position concerning IGSCC. Also, the RBS Updated Safety Analysis Report (USAR) will be revised accordingly. RBS procedures related to ISI of piping welds will be revised to reference NRC GL 88-01. The scheduling of the ISI examinations will be performed in accordance with the River Bend Station ISI Plan, which will continue to be submitted to the NRC for review.

Specification 3.4.3.1:

The design of the RBS drywell leak detection systems is described in Section 5.2.5.1.1 of the USAR. The systems include the two radioactive monitoring systems of gaseous and particulate activity, the drywell cooler condensate flow and the sump drain flow monitoring systems. The design and operation of the radioactive and cooler condensate systems will remain as previously described.

The sump drain flow system consists of two subsystems, one located in the general drywell space at the 81 ft. elevation (floor sump) and the other under the reactor vessel at 73 ft. elevation (pedestal sump). Both of the sumps are 600 gal. capacity sumps. The flow rate from each of these sumps are added to obtain the total flow rate. During the performance of a surveillance or other loss of the programmable controller (PC), operations personnel have a procedure (SOP-0104) to manually calculate the sump flow. The procedure also determines compliance with Specification 3.4.3.2 Limiting Condition for Operation (LCO) requirements 'b' (5 gpm unidentified) and 'c' (25 gpm total average over 24 hours). The PC is an operator convenience which alerts the operator prior to leakage reaching the respective technical specification limits. Because the manual method provides complete information to show compliance with the license, loss

of those automatic components which do not inhibit the operator from obtaining identical information does not result in the inoperability of the flow monitoring system. Because the instrumentation is located in the containment it can be repaired during power operations.

During the loss of a sump subsystem, GSU proposes to incorporate the GL guidance allowing plant operation for the period of 24 hours to repair or replace any inoperable components. GSU proposes to change the format of the ACTION statement to clarify the requirements for effective operator response to the loss of leak detection equipment. The proposed revision would continue to require the systems to be operable or entry into an ACTION would result. If LCO items 'a' or 'c' become inoperable, operation may continue for 30 days provided 'grab' sampling is conducted for inoperable radiation monitors. As required in GL 88-01, the new ACTION also eliminates the ability to operate 30 days with no drywell sump drain flow monitoring while allowing sufficient time to return components of the level instrumentation system to OPERABLE status. GSU concludes that this request satisfies GL 88-01 and provides sufficient protection to the health and safety of the public.

The use of the radiation monitoring systems to identify a significant increase of leakage in reactor coolant is in compliance with RG-1.45 which recommends that diverse instrumentation be capable of detecting a 1 gpm increase in reactor coolant leakage. The radiation monitoring system is discussed in Section 11.5.2.1.3.4 and Table 11.5-1 of the USAR. The monitors are powered from a safety-related class 1E source (on site backup), are seismically qualified and have ranges which exceed Regulatory Guide (RG) 1.45 recommendations. The RG also encourages the use of alternate systems "to assure effective monitoring during periods when some detection systems may be ineffective or inoperable."

The use of this radiation monitoring system will also provide information to confirm compliance with Specification 3.4.3.2 requirements during the action period. This position is supported by the heating, ventilation and air conditioning system design in the drywell as described in USAR Section 9.5 and shown on USAR Figure 9.4-8. The configuration of this system shows for a leak in the drywell the air flow will result in both sumps and the other leak detection systems being available to monitor the leakage and therefore the leakage can be monitored by alternate methods.

Specification 3.4.3.2:

During the loss of the programmable controller (PC), operations personnel have a procedure (SOP-0104) to determine compliance with Specification 3.4.3.2 Limiting Condition for Operation (LCO) requirements 'b' (5 gpm unidentified) and 'c' (25 gpm total average over 24 hours). This procedure also maintains the 24 hour total leakage while the PC is unavailable which provides the information necessary to comply with LCO 'c'. This procedure will be revised to include additional instructions for the proposed specification 3.4.3.1 LCO item 'e'. The PC is an operator convenience which alerts the operator prior to leakage reaching the respective technical specification limits. Because the manual method provides complete information to show compliance with the license, loss of those components which do not inhibit the operator from obtaining identical information does not result in the inoperability of the flow monitoring system. Because the instrumentation is located in the containment it can be repaired during power operations.

The new item 'e' to the LCO provides a new leakage rate limit as described in the GL 88-01. To accomplish the new monitoring requirement, GSU will use the present drain sump monitoring system as the primary source of information. GSU requests that this requirement only be applicable to Operational Condition 1 since during a startup, the leakage could increase during initial filling or establishing flow and pressurization of the reactor coolant pressure boundary which would not be indications of IGSCC. This exception is based on the low probability of an occurrence of an IGSCC leak during startup periods due to the limited time period spent in these operational conditions and the lower risk due to the more conservative plant conditions.

Radiation monitors will only be used in those limited cases where the proposed action requirements of 3.4.3.1.b are entered and continued compliance with 3.4.3.2 limits must be demonstrated. During periods when the floor or pedestal sumps are inoperable, GSU proposes to utilize the radiation monitoring system to identify significant changes in drywell leakage. The use of the radiation monitors is based on the designed setpoints of 1 gpm in equivalent coolant leakage as discussed in USAR and SER Sections 11.5.2 and 5.2.5. During periods when the primary drywell flow monitoring leak detection is inoperable the use of this alternative leakage indication will provide the operator prompt warning of significant changes in leakage from the reactor coolant pressure boundary (RCPB). Because the operator will be aware of changes in RCPB leakage flow and because the inoperability of the sump flow monitoring instrumentation does not result in a direct challenge to this boundary and the low probability of

an occurrence of an IGSCC leak during these periods due to the limited item period spent in this condition, GSU concludes this ACTION meets the intent of Specification 3.4.3.2 limits.

The new LCO item 'e' will also be referenced in a new ACTION 'e' to provide the associated direction to be followed upon detecting increased leakage over this period. The new ACTION is in accordance with the guidance in the GL. River Bend has experienced small prompt increases in unidentified leakage in the past which quickly stabilize at a constant or decreasing flowrate. The common sources of the leakage, if found on the following entry into the drywell, are small leaks from valve packing, pump seals or fittings which are not IGSCC susceptible. Leaks of this type have remained stable after the initial increase for an extended period. To date no IGSCC RCPB leakage has been found at RBS and the continuing ISI program is expected to identify susceptible conditions before leakage occurs. Also as discussed above, the present plant procedures result in samples of the reactor coolant, drywell atmosphere and sump discharge being evaluated when the drywell leakage rate or source is questioned. Because of the possibilities of short term increases in leakage, GSU proposes to use the action period in ACTION e to identify, isolate or allow the leak to stabilize (less than a 2 gpm/day rate) and if that remedy is successful to then exit the ACTION.

This new ACTION will allow 4 hours to: 1) identify the source of the leakage and if from an IGSCC sensitive steel will require a plant shutdown or 2) confirm the leakage is not increasing and monitor for 24 hours. If the leakage does not increase, or decreases, in the following 24 hours, the limits of the LCO will have been complied with and the ACTION can be exited. If in this 24 hour period the leakage increases above the rate identified in the initial 4 hour period, the shutdown requirement will be entered. In addition, the 5 gpm unidentified limit will continue to be complied with. The inclusion of the 2 gpm increase per 24 hr limit in this action will allow the plant operators sufficient time to:

- i) Determine the source of the leakage and isolate the component thereby returning the plant to compliance with the LCO, or
- ii) Determine that the leakage is not from the reactor coolant pressure boundary (RCPB) again returning the plant to compliance with the LCO, or
- iii) Determine the increase in leakage is not indicative of an IGSCC leak such that the 2 gpm/day rate is not sustained (the 5 gpm total unidentified leakage limit will remain) or

- iv) Continue to monitor the leakage rate for the following 24 hours to confirm the leakage is no longer increasing.

GSU concludes this position is in compliance with the Generic Letter because the plant will continue to be shutdown for leakage which continues to increase. Also, the time period allowed to address increases in leakage is limited. Furthermore, the 5 gpm total unidentified leakage limit will remain in effect. Information will also be added to the BASES of Specification 3/4.4.3.2 to provide operator guidance in determining the appropriate response to an increase in leakage.

Specification 4.4.3.2.1:

GSU's request to maintain the present monitoring frequency of once per 12 hours is based on the following:

RBS Operations shifts are conducted on a 12 hour rotation. A requirement of less than 12 hours would create an administrative burden to schedule and track the requested revision.

Any significant change in leakage will be alarmed in the main control room by the present monitoring systems which include the 1 gpm alert on the particulate and gaseous radiation monitors and the 5 gpm setpoint on the sump flow monitor. Note, the 5 gpm setpoint is calculated by the PC on a period of less than 1 hour which results in a more sensitive instrument to short term increases. This increased sensitivity often results in higher leak rate readings than actual over short time periods which results in conservative information being relayed to the operator.

GSU has determined that the presently installed monitoring systems are in excess of the RG-1.45 and Standard Review Plan requirements and meet the intent of the reduced monitoring period recommended in GL 88-01. The periodic confirmation by plant staff personnel will enhance the operators knowledge of the unidentified leakage rate. Therefore this time period has been determined to be sufficient to detect a change in leakage while not subjecting the plant to an unnecessary administrative burden.

A change to the BASES of Specification 3/4.4.3.1, "Leakage Detection Systems" for the drywell and pedestal floor sump drain flow monitoring systems is being added because loss of the automatic system does not constitute loss of the system provided a manual procedure is used. This is justified since the inputs to the manual method are the same as to the computer. Also, the substitution of "grab" samples for the drywell particulate and

gaseous monitors allows for continued monitoring of the function while automatic components are inoperable.

A change to the BASES of Specification 3/4.4.3.2, "Operational Leakage," identifies the use of the drywell radiation monitors as alternate means to monitor leakage while the sump flow monitoring system is inoperable and adds information on the ACTION requirements. The use of the radiation monitoring system continues to provide the operators with drywell leakage information during sump flow indication system outages. Therefore, leakage is monitored and the control room personnel can be alerted in an appropriate time frame. The applicable actions to be taken are discussed above under Specification 3.4.3.2.

Because this is a change to the BASES there is no change to the Technical Specifications as defined in 10CFR50.36 and therefore these changes are not addressed in the 'No Significant Hazards Consideration' determination included in this submittal.

As a editorial change the note * on Specifications 4.4.3.1.d and 4.4.3.2.2.a can be removed because the referenced refueling outage has past.

NO SIGNIFICANT HAZARDS CONSIDERATION

As required by 10CFR50.92, the following is provided to the NRC in support of a "No Significant Hazards Considerations" determination.

I. Probability or Consequences of an Accident Previously Evaluated:

For Specification 4.0.5 there will be no increase in the probability or the consequences of an accident previously evaluated because there are no design changes or modifications to plant operation associated with this amendment. This change will only be an enhancement of the inservice inspection surveillance involving IGSCC and does not reduce any of the ASME B&PV Code, Section XI - Division 1 requirements.

For Specifications 3.4.3.1 and 3.4.3.2, there is no increase in the probability or consequences of an accident previously evaluated because there are no changes to the design or operation associated with this amendment. This change will provide further restriction on the operation of the plant when the leakage rate on IGSCC susceptible steel increases above 2 gpm/day and when monitoring equipment is inoperable.

II. Possibility of a New or Different Kind of Accident:

Since this amendment changes documents related to inservice inspection surveillance and places additional restrictions on plant operation with inoperable equipment there is no possibility of a new or different kind of accident. If indications are identified in piping, an evaluation will be performed in accordance with ASME B&PV Code, Section XI - Division 1, already identified in the RBS Technical Specifications.

For Specifications 3.4.3.1 and 3.4.3.2, there is no possibility of a new event because there are no changes to the design or operation associated with this amendment. This change will provide further restriction on the operation of the plant when the leakage rate on IGSCC susceptible steel increases above 2 gpm/day and when monitoring equipment is inoperable.

III. Margin of Safety:

There will not be a reduction in the margin of safety due to this amendment since this change to the RBS Technical Specifications will increase the number of inservice inspection surveillances and further restrict operation with increasing leakage or inoperable monitoring equipment. With frequent surveillances being performed, the probability of an

accident is diminished. With increased restrictions on operation with increasing leakage or inoperable monitoring equipment resulting in plant shutdown, this change will not result in a reduction in the margin of safety.

As discussed above the proposed change does not increase the probability or consequences of a previously evaluated accident and will not create a new or different kind of accident. Also, because adequate margin has been shown with respect to all design limits, the proposed change does not result in a reduction to the margin of safety. Therefore, GSU concludes there are no significant hazards involved.

REVISED TECHNICAL SPECIFICATION

The requested revisions are provided in Enclosure I.

REVISED TECHNICAL SPECIFICATION BASES

The requested revisions are provided in Enclosure II.

SCHEDULE FOR ATTAINING COMPLIANCE

River Bend Station is currently in compliance with this specification. The modifications to the ISI plan will be initiated and the specifications will be implemented within 60 days after receiving the approved amendment.

NOTIFICATION OF STATE PERSONNEL

A copy of this amendment request has been provided to the State of Louisiana, Department of Environmental Quality - Radiation Protection Division.

ENVIRONMENTAL IMPACT APPRAISAL

Gulf States Utilities (GSU) has reviewed the proposed license amendment request against the criteria of 10CFR51.22 for environmental considerations. The proposed changes do not involve a significant hazards consideration, nor increase the types and amounts of effluents that may be released offsite, nor significantly increase individual or cumulative occupational radiation exposures. Thus, GSU concludes that the proposed change meets the criteria given in 10CFR51.22(c)(9) for a categorical exclusion from the requirement for Environmental Impact Statement.

LAR8906.R10

ENCLOSURE I

INSERTS

I. Specification 4.0.5

- f. The Inservice Inspection Program (ISI) for piping susceptible to Intergranular Stress Corrosion Cracking (IGSCC) shall be performed in accordance with the NRC positions included in Generic Letter 88-01.

II. Specification 3.4.3.1

ACTION a

- a. With leak detection systems 'a' and/or 'c' inoperable operation may continue for up to 30 days provided grab sample are obtained and analyzed at least once per 24 hours for the inoperable radiation monitors; otherwise, be in HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

ACTION b

- b. With the drywell floor and/or pedestal sump drain flow monitoring subsystem inoperable, operation may continue for up to 24 hours otherwise, be in at least HOT SHUTDOWN within the next 24 hours and in COLD SHUTDOWN within the following 24 hours.

III. Specification 3.4.3.2

LCO 'e'

- e. 2 gpm UNIDENTIFIED LEAKAGE increase within any period of 24 hours or less (Applicable in OPERATIONAL CONDITION 1 only)

ACTION 'e'

- e. With any reactor coolant system UNIDENTIFIED LEAKAGE increase greater than the limits in e ,above, within 4 hours;
 - 1. identify the source of leakage as not IGSCC susceptible material , or
 - 2. verify the leakage is no longer increasing and reduce the leakage within the limits within the next 24 hours.

Otherwise be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.