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February 17, 1994

U. S. Nuclear Regulatory Commission  
Region IV  
611 Ryan Plaza Drive, Suite 400  
Arlington, TX 76011

Subject: River Bend Station - Unit 1  
Docket No. 50-458  
License No. NPF-47  
Request for Exercise of Enforcement Discretion  
for Non-compliance with Action Statement

File Nos.: G9.5, G9.42

RBG-40062

Gentlemen:

On February 12, 1994, Entergy Operations, Inc. (EOI) entered the ACTION for Technical Specification 3.6.1.10 for an inoperable Division II Penetration Valve Leakage Control System compressor. We have been unable to return the compressor to an OPERABLE status and, as such, the seven (7) day allowable out-of-service time will expire at 2002 on February 19, 1994. The expiration of this Limiting Condition for Operation (LCO) requires the plant to be in a shutdown condition within twelve (12) hours. EOI requests enforcement discretion to continue modification and repair to the Division II Penetration Valve Leakage Control compressor. This discretion will not exceed 21 days from the time the ACTION was entered on February 12, 1994. An associated Technical Specification change request will be submitted promptly. Granting the proposed enforcement discretion will allow River Bend Station to avert an unnecessary plant shutdown for a condition which does not constitute a reduction in the overall protection of the public health and safety.

This request has been reviewed and approved by the River Bend Station Facility Review Committee. The attachment provides the information supporting the request. Your cooperation regarding EOI's request is greatly appreciated.


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If you have further questions regarding the attached information, please contact me or my staff.

Sincerely,



Mike Sellman  
Plant Manager

MBS/jhp  
enclosure

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Attn: Administrator

## Attachment 1

### REQUEST FOR RIVER BEND STATION ENFORCEMENT DISCRETION

#### DISCUSSION OF THE REQUIREMENTS

Technical Specification 3.6.1.10 specifies two Penetration Valve Leakage Control Systems (PVLCS) shall be OPERABLE when in OPERATIONAL CONDITIONS 1, 2 and 3. The ACTION for one PVLCS subsystem inoperable is to restore the inoperable subsystem to OPERABLE status within seven days or be in HOT SHUTDOWN within the following twelve (12) hours and COLD SHUTDOWN within the following twenty-four (24) hours.

On February 12, 1994, River Bend Station entered the ACTION statements for Technical Specifications 3.6.1.5 and 3.6.1.10 after failing to meet the acceptance criteria of the Penetration Valve Leakage Control System (PVLCS) Air Compressor LSV\*C3B Auto STOP/START Monthly Channel Calibration surveillance test procedure. Technical Specification 4.6.1.5.b specifies the surveillance requirement for determining OPERABILITY of the PVLCS compressors. The ACTION for the PVLCS Technical Specification 3.6.1.10 will exceed its seven (7) day allowable out-of-service time on February 19, 1994, at 2002, and will necessitate an immediate shutdown of the plant.

EOI is requesting enforcement discretion to allow RBS to operate in MODES 1, 2 or 3 for 21 days. Additionally EOI will submit a Technical Specification change request to extend the LCO allowable out-of-service time. This discretion will not exceed 21 days from the time the ACTION was entered on February 12, 1994.

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### CIRCUMSTANCES AND NEED FOR REQUEST

The initial entry into the ACTION statement for Technical Specification 3.6.1.10 was made as a result of failing to meet the acceptance criteria of the Penetration Valve Leakage Control System (PVLCS) Air Compressor LSV\*C3B Auto STOP/START Monthly Channel Calibration surveillance test procedure. The Division II PVLCS compressor tripped due to low level in the separator tank at the discharge of the compressor. Low level conditions in the separator tank were believed to have been caused by foaming of the water, malfunctioning of the separator level control valve and loss of separator water through the air intake. Although the compressor has been run successfully since this occurred and the separator level control valve has been repaired, Engineering has determined that the inlet check valve should be reinstalled and the unloader valve be restored to service. This will prevent loss of separator water level. In addition, Chemistry will continue efforts to optimize the chemical addition program for the Normal Service Water System which provides sealing and cooling water to the PVLCS system in order to minimize foaming in the PVLCS separator tank. Further compressor test runs will be required to both prove the effectiveness of the repairs and evaluate changes in chemical addition. Additional modifications and tests may take longer than the current seven (7) day allowable out-of-service time permits without requiring a shutdown of the plant. An unplanned outage at this time would severely impact fuel efficiency and plans for the upcoming planned outage.

The Division I PVLCS compressor 1LSV\*C3A is considered OPERABLE, based on the following :

1. There have been no failures related to the separator tank or compressor of the STP functional since RF-04 (September 1992).
2. A review of the LCOs since RF-04 revealed no problems with the separator or its refilling.
3. Following the problems with the DIVISION II PVLCS compressor 1LSV\*C3B on 1/23/94, the DIVISION I compressor was run satisfactorily. Separator level remained normal. No separator refill problems were noted.

Should the proposed request not be granted, RBS expects to be forced to implement an unplanned outage during this operating cycle.

## ADDITIONAL ACTIONS

A change to this LCO has been recently proposed by RBS in a letter dated November 30, 1993 (Improved Technical Specification change request), which would amend the RBS Technical Specifications consistent with the guidance of NUREG-1434. EOI would be promptly requesting, in accordance with 10CFR50.90, a Technical Specification change request to adopt the out-of-service time specified in LCO 3.6.1.8 of NUREG-1434 as a specific line-item improvement prior to the issuance of the Improved Technical Specifications.

## SAFETY EVALUATION

The PVLCS supplements the isolation function of primary containment isolation valves (PCIVs) in process lines that also penetrate the secondary containment. These penetrations are sealed by air from the PVLCS to prevent fission products leaking past the isolation valves and bypassing the secondary containment after a Design Basis Accident (DBA) loss of coolant accident (LOCA).

The PVLCS consists of two independent, manually initiated subsystems, either of which is capable of preventing fission product leakage from the containment post LOCA. Each subsystem is comprised of an air compressor, an accumulator, an injection valve, and three injection headers with separate isolation valves. This system has additional headers, which serve the Main Steam Positive Leakage Control System (MS-PLCS) and safety/relief valve (S/RV) actuator air accumulators.

The PVLCS compressors serve two functions described in the safety analysis. The first and primary function of the compressors is to provide a safety related air supply to the PVLCS accumulators. Updated Safety Analysis Report (USAR), Section 9.3.6, states that the purpose of the PVLCS is to control and minimize the release of fission products which could leak through and from valves in lines penetrating the containment structure which could potentially leak to the environment without prior processing by the standby gas treatment system or the charcoal filtration system of the fuel building ventilation system (bypass leakage). The PVLCS compressors supply air to pressurize valve bodies in various fluid systems that penetrate containment by injecting air into the space between the seats of the double-disk gate valves. The pressure barrier is maintained at a pressure at least 10 percent higher than the peak calculated drywell pressure. Thus, for the sealed valves, only inleakage of nonradioactive air into the containment is possible past the valves, and no post-LOCA containment atmosphere is discharged through the pressurized valves. Technical Specification

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3.6.1.10 requires the PVLCS accumulator pressure to be greater than or equal to 101 psig. The Staff review of this system is cited in Section 9.3.1 of the RBS Safety Evaluation Report, NUREG-0989, dated May 1984

The second function of the compressors is to provide a safety related backup air supply to the SRV and ADS accumulators. USAR, Section 5.2.2.4.1, states that the primary source of air for the SRV and ADS accumulators is from the non-nuclear safety main steam system air compressors. Backup to this system is the safety related PVLCS compressors. These compressors are manually placed in service approximately 20 minutes following a LOCA event to ensure intermediate and long-term operability of the ADS valves. This Staff review of this system is cited in Section 3.10.2.7 of the RBS Safety Evaluation Report, Supplement No. 3, NUREG-0989, dated August 1985.

The RBS probabilistic safety assessment (PSA) for a loss of one PVLCS compressor indicated that as an isolation function:

1. From the Level 1 Individual Plant Examination (IPE), the probability of the deterministic DBA LOCA with concurrent loss of offsite power and worst case loss of one emergency diesel generator is less than  $3E-12$  per year. Therefore the loss of the PVLCS compressor is an extremely low probability event.
2. From the Level 2 IPE, the PVLCS compressor was not explicitly modeled. However, its performance can be bounded by the loss of isolation during a core damage event. For the Level 1 IPE core damage frequency of  $1.55E-5$  per year, loss of isolation occurs with a frequency of  $4.15E-7$  per year. This is a low safety significance and includes events for which no power would be available to the PVLCS compressor even if they were otherwise operable (e.g. station blackout). Based on this conservatism, the time safety significance of this event should be less than NUMARC's threshold of  $1E-7$  per year for no corrective action needed.

The RBS probabilistic safety assessment (PSA) for a loss of one PVLCS compressor indicated that as a backup to the ADS function the increase of core damage is insignificant. The increase in frequency of core damage is  $3.76E-10$  per year. This represents a very small increase from the core damage frequency quantified in the RBS IPE. Moreover, the air supply to the SRV's is not credited for compliance to the Station Blackout (SBO) Rule. The 4-hour SBO coping duration analysis for RBS demonstrates that SRV accumulators have adequate capacity to mitigate this event.



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As presented in the BWR Standard Technical Specifications, NUREG-1434, systems that have an allowed out-of-service time of 30 days for one division (subsystem) inoperable, typically allow 7 days for instances when both divisions (subsystems) are out-of-service. These out-of-service times are based on engineering judgement of: 1) the safety significance of the system; 2) the probability of an event requiring the safety function of the system; and 3) the relative risks associated with the plant transient and potential challenge of safety systems experienced by requiring a plant shutdown.

The 21 days is within the allowable out-of-service time of 30 days specified in LCO 3.6.1.8 of NUREG-1434, "Standard Technical Specification General Electric Plants, BWR/6" for this system. As detailed in NUREG-1434, a 30-day out-of-service time is based on the low probability of the occurrence of a loss-of-coolant accident (LOCA), the amount of time available after the event for operator action to prevent exceeding this limit, the low probability of failure of the other subsystem of PVLCS, and the availability of the primary containment isolation valves.

In the Improved Technical Specifications, submitted by RBS on November 30, 1993 (RBG-39478), this system has an allowed out-of-service time of 30 days for one division and 7 days for two divisions inoperable. This submittal follows the guidance in the NRC issued NUREG 1434.

### SIGNIFICANT HAZARDS EVALUATION

Entergy Operations, Inc. has evaluated this proposed Technical Specification change and has determined that it involves no significant hazards consideration. This determination has been performed in accordance with the criteria set forth in 10 CFR 50.92. The following evaluation is provided for the three categories of the significant hazard consideration standards:

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

This change would allow 21 days of continued operation with one penetration valve leakage control system (PVLCS) subsystem inoperable. The PVLCS is not an initiator of any previously analyzed accident. Therefore, this change does not significantly increase the frequency of such accidents. The proposed change would only increase the allowed outage time with one OPERABLE PVLCS. The PVLCS is required to mitigate the consequences of a design basis accident (DBA). These limiting faults are not expected to occur but are postulated because their consequences may

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result in the release of significant amounts of radioactive material.

Based on the RBS Level 1 and Level 2 Individual Plant Examination (IPE), the loss of one train of PVLCS, concurrent with a DBA and subsequent radionuclide release, is an extremely low probability event (e.g. less than  $1E-7$  per year). This probability is less than the NRC Safety Goal of  $1E-6$  per year for large releases following a core damage event. Because of the extremely low probability of the event, the increase in allowed outage time from 7 days to 21 days does not represent a significant increase in the probability or consequences of the DBA which PVLCS is intended to mitigate.

The PVLCS is not an initiator of any previously analyzed accident. The configuration of one system inoperable is presently addressed by the specification and therefore will not change an allowed operation. Because the operation is no different than previously allowed the consequences of an event previously evaluated have not been increased. The probability of an event requiring the system has been evaluated and determined to be very low and therefore, this change does not significantly increase the frequency of such accidents.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

The proposed change to increase the allowed outage time from 7 days to 21 days does not result in the possibility of a new or different kind of accident from any accident previously evaluated. This change does not result in any changes to the equipment design or capabilities. Since the PVLCS mitigates the consequences of an accident and failure of this system cannot create an accident, the proposed change can at most affect only accidents which have been previously evaluated. Therefore, this proposed change does not create the possibility of a new or different kind of accident from any previously analyzed accident.

3. Does this change involve a significant reduction in a margin of safety?

The proposed change to increase the allowed outage time from 7 days to 21 days does not involve a significant reduction in the margin of safety. As stated above, the proposed change only increases the allowed outage time for a system that is used to mitigate the consequences of an accident. The system continues to perform its intended safety function and the change in allowed outage time has a very small impact on plant risk. Therefore, the



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proposed change does not result in a significant reduction in a margin of safety.

### ENVIRONMENTAL CONSEQUENCES

EOI has reviewed the proposed enforcement discretion against the criteria of 10CFR51.22 for environmental considerations. The proposed changes do not involve a significant hazards consideration, do not significantly increase the types or quantity of effluent that may be released offsite, and do not significantly increase individual or cumulative occupational radiation exposures. Based on the foregoing, EOI concludes that the proposed change meets the criteria given in 10CFR51.22 (c)(9) for a categorical exclusion from the requirement for an Environmental Impact Statement.