

RIVER BEND STATION POS² OFFICE BOX 220 ST FRANCIEVILLE LOUISIANA 7077 AREA CODE DO4 826-6054 346-8651

> March 29, 1993 RBG- 38288 File Nos. G9.5, G9.25.1.3

U.S. Nuclear Regulatory Commission Document Control Desk Washington, D.C. 20555

Gentlemen:

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

Please find enclosed Licensee Event Report No. 93-003 for River Bend Station -Unit 1. This report is submitted pursuant to 10CFR50.73.

Sincerely,

England

J. E. Booker Manager - Safety Assessment and Quality Verification River Bend Nuclear Group



304050 ADOC 050 PDR UJUUJA

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

> NRC Resident Inspector P.O. Box 1051 St. Francisville, LA 70775

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INPO Records Center 1100 Circle 75 Parkway Atlanta, GA 30339-3064

Mr. C.R. Oberg Public Utility Commission of Texas 7800 Shoal Creek Blvd., Suite 400 North Austin, TX 78757

Department of Environmental Quality Radiation Protection Division P.O. Box 82135 Baton Rouge, LA 70884-2135 ATTN: Administrator

NRC 70 (5-92)	C FORM 366 U.S. NUCLEAR REGULATORY COMMISSION						ISSION	APPROVED BY OMB NO. 3150-0104 EXPIRES 5/31/95								
See reverse for required number of digits/characters for each block)						ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THU INFORMATION COLLECTION REQUEST 50.0 HRS FORWARE COMMENTS REGARDING BURDEN ERTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB T714), U.S. NUCLEA REQUILATORY COMMISSION, WASHINGTON, DC 20055-0001, AND TO THE PAPERWORK REDUCTION PROJECT (2150-0104), OFFICE (0 MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.										
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On February 25, 1993, it was discovered that two incidents occurred which apparently caused the upper containment airlock at elevation 171° to malfunction. In one incident the seals on one airlock door were partially deflated while the other airlock door was not completely closed. This constituted a containment breach. Therefore, this report is submitted pursuant to 10CFR50.73(a)(2)(v) as a condition that alone could have prevented the fulfillment of a safety function.

Upon identifying the first incident, STP-057-0401 "Primary Containment Airlock Door Interlock Test" was performed to verify operation of the mechanical interlocks. A maintenance work order was generated to inspect the interlock malfunction following the second incident. A prompt modification request has been generated so that the handwheel lock solenoid will energize directly from the airlock door open/close limit switches during manual operation of the door, with power supplied to the airlock. This will prohibit movement of the door handwheel when the door is outside its frame. The root cause of this incident is still being investigated and will be provided in a revision to this LER. GSU continues to investigate the safety significance of this event.

REQUIRED NUMBER OF DIGITS/CHARACTERS FOR EACH BLOCK

1.1

BLOCK NUMBER	NUMBER OF DIGITS/CHARACTERS	TITLE
1	UP TO 46	FACILITY NAME
2	B TOTAL 3 IN ADDITION TO 05000	DOCKET NUMBER
Э	VARIES	PAGE NUMBER
4	UP TO 76	TITLE
5	6 TOTAL 2 PER BLOCK	EVENT DATE
6	7 TOTAL 2 FOR YEAR 3 FOR SEQUENTIAL NUMBER 2 FOR REVISION NUMBER	LER NUMBER
7	6 TOTAL 2 PER BLOCK	REPORT DATE
8	UP TO 18 - FACILITY NAME 8 TOTAL - DOCKET NUMBER 3 IN ADDITION TO 05000	OTHER FACILITIES INVOLVED
9	3	OPERATING MODE
10	3	POWER LEVEL
11	1 CHECK BOX THAT APPLIES	REQUIREMENTS OF 10 CFR
12	UP TO 50 FOR NAME 14 FOR TELEPHONE	LICENSEE CONTACT
13	CAUSE VARIES 2 FOR SYSTEM 4 FOR COMPONENT 4 FOR MANUFACTURER NPRDS VARIES	EACH COMPONENT FAILURE
14	CHECK BOX THAT APPLIES	SUPPLEMENTAL REPORT EXPECTED
15	6 TOTAL 2 PER BLOCK	EXPECTED SUBMISSION DATE

U.S. NUCLEAR REGULATORY COMMISSION				APPROVED BY OMB NO. 3150-0104 EXPIRES 5/31/95					
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REPORTED CONDITION

On February 25, 1993, with the unit in Operational Condition 1 (Power Operation), it was discovered that two incidents occurred which apparently caused the upper containment airlock (*AL*) (1JRB*DRA1) at elevation 171' to malfunction. In one incident the seals on one airlock door were partially deflated while the other airlock door was not completely closed. This constituted a containment (*NG*) breach. Therefore, this report is submitted pursuant to 10CFR50.73(a)(2)(v) as a condition that alone could have prevented the fulfillment of a safety function.

INVESTIGATION

The first incident occurred at 1350 on February 25, 1993. An individual entered the containment airlock from the outer door, auxiliary building side. He attempted to manually close the outer airlock door from inside the airlock. He rotated the handwheel towards the "close" position, unaware that the airlock door was not seated completely in its frame. Movement of the handwheel into the "seal" position caused the seals to inflate while the airlock door was still outside its frame. Additionally, the door's latch pins were extended. However, due to the door's position, the latch pins were not in their keepers. The individual then proceeded to attempt to open the reactor door. The reactor door handwheel was rotated towards the "open" position which initiated depressurization of the seals.

Having the seals deflated on the reactor door, while the outer door was slightly ajar, caused a momentary breach of the containment. The individual inside the airlock promptly closed and secured the reactor door upon being informed by individuals on the auxiliary building side of the airlock that the outer door was not sealed properly. He opened and then properly closed and secured the outer door. STP-057-0401 "Primary Containment Airlock Door interlock Test" was performed immediately after this incident to verify operation of the mechanical interlocks.

The second incident occurred approximately at 2100 on February 25, 1993. As an individual was entering the airlock from the auxiliary building, the handwheel on the reactor door was partially rotated while the outer door was not completely closed and sealed. However, the seals on the reactor door were not deflated, thus a containment breach did not occur. Maintenance Work Order No. R174728 was generated by the Shift Supervisor to inspect the interlock mechanism following the second incident.

NRC FORM 366A	U.S. NUCLEA	R REGULATORY COMMISSION	APPROVED BY OMB NO. 3150-0104 EXPIRES 5/31/95					
LICENSE	E EVENT REPOR	ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH TH INFORMATION COLLECTION REQUEST, 50.0 HRS. FORWAR COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATIO AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLES REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND T THE PARERWORK REDUCTION PROJECT (\$150-0104), OFFICE C MANAGEMENT AND BUDGET, WASHINGTON, DC 20503						
FACILITY	NAME (1)	DOCKET NUMBER (2)	1	LER NUMBER ())	PAGE (3)		
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RIVER BEND ST	BEND STATION 458		93	003	00	3 4		

As identified in the vendor's operation and maintenance manual (3219.711-056-001), the two doors, one at each end of the airlock, are designed to be mechanically interlocked so that one door cannot be opened unless the other is completely closed and sealed. When one door is open, the mechanical interlock mechanism is designed to lock the opposite airlock door so that the containment cannot be breached during access through the airlock.

When operating the doors manually, as identified in the vendor manual, special care must be taken by the individual when the door is in the open position. Operating instructions are posted on each airlock door identifying the proper operation of the doors in the manual and automatic mode.

In addition to the mechanical interlock, the airlock is designed with a solenoid activated handwheel locking mechanism. The purpose of the handwheel locking mechanism is twofold. Under complete automatic operation, with power supplied to the airlock, the handle lock solenoid mechanism functions as part of the differential pressure monitoring system. If a differential pressure of more than 0.5 psi exists across the airlock door, the handwheel locking mechanism is energized and for personnel safety prevents the continuation of the opening sequence until the pressure is equalized.

In addition to being used as a part of the differential pressure monitoring system, under automatic conditions, the handwheel locking mechanism energizes when the door is opened. This prevents rotation of the handwheel while the door is in the open position. The handle locking mechanism that prevents the handwheel from rotating when the door leaves its frame, will not function when the door is operated in the manual mode (power off). Movement of the handwheel to the "seal" position de-activates the mechanical interlocks. If this occurs with the door not fully closed, the seals will inflate, potentially damaging the seals and causing personal injury.

The handwheel locking mechanism, which would have prevented the handwheel from rotating when the door was in the open position, was de-energized prior to the two incidents described above.

ROOT CAUSE

The root cause of this incident is still being investigated and will be provided in a revision to this LER.

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CORRECTIVE ACTION

Upon identifying the first incident, STP-057-0401 "Primary Containment Airlock Door Interlock Test" was performed to verify operation of the mechanical interlocks. Maintenance Work Order No. R174728 was generated by the Shift Supervisor to inspect the interlock malfunction following the second incident. As a compensatory measure, GSU took actions consistent with the Action Statement of TS 3.6.1.4, "Primary Containment Airlocks."

Prompt modification request (PMR) 93-009 has been generated so that the handwheel lock solenoid will energize directly from the airlock door open/close limit switches during manual operation of the door, with power supplied to the airlock. This will prohibit movement of the door handwheel when the door is outside its frame. This change will ensure that the mechanical interlocks are maintained even if an attempt is made to misoperate the equipment. In addition, prohibiting movement of the handwheel will ensure that the seals are not inflated when the door is open, which could result in personal injury and/or damage to the seals.

SAFETY ASSESSMENT

Technical Specification 3.6.1.1, "Primary Containment Integrity - Operating" provides one hour to restore containment integrity. This event constituted a momentary breach due to seal deflation and thus was well within the one hour time limit. GSU continues to investigate the safety significance of this event.

Note: Energy industry identification codes are indicated in the text as (*XX*).