

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) RIVER BEND STATION	DOCKET NUMBER (2) 0 5 0 0 0 4 5 8	PAGE (3) 1 OF 1 1 2
--	---	-------------------------------

TITLE (4)
Unsealed Fire Barrier Penetrations

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES		DOCKET NUMBER(S)
03	01	88	88	009	01	04	29	88			050000
											050000

OPERATING MODE (9) 1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)									
POWER LEVEL (10) 100	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.406(e)	<input type="checkbox"/> 50.73(a)(2)(vi)	<input type="checkbox"/> 73.71(b)						
	<input type="checkbox"/> 20.406(a)(1)(i)	<input type="checkbox"/> 50.38(a)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(e)						
	<input type="checkbox"/> 20.406(a)(1)(ii)	<input type="checkbox"/> 50.38(a)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 365A)						
	<input type="checkbox"/> 20.406(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)							
	<input type="checkbox"/> 20.406(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)							
<input type="checkbox"/> 20.406(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)								

LICENSEE CONTACT FOR THIS LER (12)		TELEPHONE NUMBER	
NAME L. A. England - Director-Nuclear Licensing		AREA CODE 504	3811-141145

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)									
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS

SUPPLEMENTAL REPORT EXPECTED (14)			EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
<input checked="" type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input type="checkbox"/> NO			08	26	88

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single space typewritten lines) (16)

At 1000 hours on 3/1/88 with the unit at 100 percent power (operating condition 1), an unsealed penetration was discovered in a control building fire wall on the 70 foot elevation. A second unsealed penetration was discovered in the 98 foot elevation of the diesel generator building at 0830 hours on 3/11/88. On 3/17/88 at 1100, an unsealed penetration and an uncoated steel beam (forming part of a fire barrier assembly) was discovered in an auxiliary building fire wall in the "D" tunnel on the 70 foot elevation. On 3/24/88 at 1630, inadequately sealed penetrations between the auxiliary building and the annulus were discovered. On 4/12/88 at 1100, an opening between a control building fire door frame and the fire wall was discovered. On 4/14/88 at 0800, engineering identified an open hatchway between fire areas, an open trench between fire areas and an unqualified penetration seal. A fire watch was in effect for these areas, except for the area of the control building door at the time of discovery. A fire watch was established in the control building, satisfying the action statement in Technical Specification 3/4.7.7. The penetrations were found during installation of security communications cable for a plant modification and replacement of missing termination cabinet hardware. The annulus penetrations had been breached, while the remaining penetrations had never been sealed. The door frame had been previously sealed to the wall, but the door frame had been removed at one time and not resealed. Safety analysis of the open hatchway, trench and unqualified seal design is continuing. Analysis of the remaining postulated fire events shows no adverse safety consequences due to the unsealed penetrations.

JEZZ

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) RIVER BEND STATION	DOCKET NUMBER (2) 0 5 0 0 0 4 5 8 8 8	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	DIVISION NUMBER		
		8 8	- 0 0 9	- 0 1	0 2	OF 1 2

TEXT (if more space is required, use additional NRC Form 366A x) (17)

REPORTED CONDITION

Reported conditions are as follows:

1. At 1000 hours on 3/1/88 with the unit at full power in operating condition 1, Gulf States Utilities (GSU) Quality Control (QC) personnel found an unsealed penetration (*PEN*) in a control building fire wall.
2. At 0830 hours on 3/11/88, Quality Control personnel reported finding an unsealed conduit penetration in the fire wall between the 1E22*ENGS001 high pressure core spray (HPCS) (*BG*) diesel (*DG*) and 1EGS*EG1B (division II) diesel control rooms.
3. On 3/17/88 at 1100 an unsealed penetration and an uncoated steel beam (forming part of a fire barrier assembly) was discovered in an auxiliary building (*NF*) fire wall in the "D" tunnel on the 70 foot elevation.
4. On 3/24/88 at 1630, inadequately sealed penetrations between the auxiliary building and the annulus were discovered.
5. On 4/12/88 at 1100, gaps between the CB98-21R door frame and wall were discovered. This is a fire door between the chilled water equipment room 1B and the general area in the control building (*NA*), elevation 98 feet.
6. On 4/14/88 at 0800, engineering discovered two areas where plant design allowed communication between fire areas. Installation of a penetration seal in an unqualified configuration was also identified.

River Bend Station (RBS) Technical Specification 3/4.7.7 requires all sealing devices in fire rated assembly penetrations be operable at all times.

Condition Reports (CRs) were initiated as each opening was discovered. A fire watch was initiated for the control building door (reported condition 5) within the one hour time limit. A fire watch for the remaining areas was in effect at the time the unsealed penetrations were discovered, satisfying the action statement in Technical Specification Section 3/4.7.7.

EVALUATION AND INITIAL CORRECTIVE ACTION

Evaluation and initial corrective action has been performed for the reported conditions as follows:

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) RIVER BEND STATION	DOCKET NUMBER (2) 0500045888	LFR NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		88	009	010	3	OF 12

TEXT (if more space is required, use additional NRC Form 366A (11/73))

1. Unsealed penetration, control building wall, elevation 70 feet:

The opening in the control building fire wall was discovered during repair of a nearby penetration, breached as required by Modification Request (MR) 87-0414, which is a plant modification for the installation of security communication cable. Personnel performing the repair noted the opening and informed GSU Quality Control. The opening is at elevation 91 feet - 6 inches, 7 feet - 4 inches west of CA-line, on the wall 1 foot - 3 inches south of 2-line. This wall separates cable (*CBL*) area C from heating ventilation and air conditioning (HVAC) (*VI*) room 1A. The opening itself is approximately 8 inches in diameter with a 3 inch fire protection line passing through the opening.

2. Unsealed penetration, diesel generator building wall, elevation 98 feet:

The opening between the HPCS and division II diesel control rooms was discovered during the performance of MR 87-0414. Inspection of this penetration noted the absence of fire seal (*SEAL*) material in penetration 1WS911N11, approximately 20 inches west at the same elevation. Maintenance Work Order (MWO) 116710 and a Limiting Condition of Operation (LCO) were initiated to track sealing of the open penetration.

3. Unsealed penetration and uncoated steel beam, auxiliary building "D" tunnel, elevation 70 feet:

The opening in the auxiliary building is located in the northeast corner of "D" Tunnel where a small room is located containing division II cable. The remainder of "D" tunnel cable is division I, although division II motor operated valves (MOVs) are located in this same area. The opening is in the southwest corner of the division II room, at the ceiling. The rectangular opening is formed by the area between the web and flanges of the W36X182 beam, which comprises the top three feet of the division II room south wall. The opening was found by QC personnel during sealing of penetration seals breached under MR 87-0414. MWO 116737 was initiated to seal the opening and track its closure on the firewatch LCO.

4. Inadequately sealed penetrations, reactor building shield wall, elevations 114 and 141 feet:

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) RIVER BEND STATION	DOCKET NUMBER (2) 0 5 0 0 0 4 5 8 8 8	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		8 8	- 0 0 9	- 0 1 0	4	OF 1 2

TEXT (if more space is required, use additional NRC Form 365A's) (17)

Penetration 1WX513N28, between the annulus and the auxiliary building (1RCP*TCA9) was found open during an effort to replace missing hardware on the termination cabinets. Initial corrective action was to verify annulus pressure, which was acceptable at -3.9 inches water gage (W.G.). To reduce inleakage, the identified penetration was temporarily sealed. All other penetrations behind termination cabinets that penetrate the annulus from secondary containment were inspected by GSU engineering. One other breach was found in 1RCP*TCA12, auxiliary building elevation 141 feet, penetration 1WX510R22. This penetration was also sealed to reduce inleakage. These openings were added to the fire watch LCO already existing in these areas.

- Inadequate seal around control building door frame, elevation 98 feet:

Door CB98-21R is a removable frame fire door located on the south side of chilled water equipment room 1B. The opening discovered is the space between the door frame and the south wall itself. This gap varies slightly around the door, but averages approximately 1/4 inch. MWO 113670 was initiated to seal this perimeter opening and track closure against the LCO.

- Communication between fire areas, open hatchway and improperly installed penetration seal:

Plant walkdowns performed by engineering and QC personnel revealed that an open hatchway exists between elevation 98 feet and elevation 70 feet of the auxiliary building, east side in a fire rated floor. Likewise, a drainage trench was found that communicates between division I and division II fire areas in 'B' tunnel, east of the fuel building. This trench penetrates fire rated walls. Examination of the division I safe shutdown room shows cable tray and conduit entering the gypsum board walls. These walls have a three hour fire rating. Openings in these walls are sealed with B&B Promatec silicone elastomer. All qualification testing available shows these sealants to be qualified in concrete walls. Due to the difference in fire behavior, performance of these seals in a metal stud/gypsum board wall may be different than a concrete wall. Safety analysis of these items is continuing and will be included in a supplement to this LER.

Fire watches will continue as required until each identified open penetration has been sealed, and design changes as required are installed.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) RIVER BEND STATION	DOCKET NUMBER (2) 0 5 0 0 0 4 5 8	LER NUMBER (8)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		8 8	- 0 0 9	- 0 1	0 5	OF 1 2

TEXT (if more space is required, use additional NRC Form 366A z) (17)

FURTHER INVESTIGATION AND CORRECTIVE ACTION

1. Unsealed penetration, control building wall, elevation 70 feet:

A stainless steel sleeve (*SLV*) was found around the pipe in the penetration in the control building fire wall, discovered on 3/1/88. An adhesive sealant had been used to seal the annular space between the pipe and sleeve. A subcontractor work tag was found attached to the wall nearby. Review of design documents shows this penetration was created under Engineering and Design Coordination Report (E&DCR) C-14461A to allow passage of the AS-6C sprinkler system line. The E&DCR provides a 4 inch diameter sleeve. No reseal instructions or penetration number was provided. By inspection of the design documents and the as found condition, it is apparent construction crafts exposed the first rebar layer to allow an opening to be chipped in the wall without rebar damage. The penetration was made, the pipe was put in place, and the subcontractor installed a sleeve and a fire seal. Repair of the wall was never addressed, and each contractor assumed the other would repair the wall. The penetration has been open since the conclusion of construction. The opening will be grouted in accordance with Specification 210.370, the site specification for concrete installation.

2. Unsealed penetration, diesel generator building wall, elevation 98 feet:

Penetration 1WS911N11 between the HPCS diesel generator control room and the division II diesel generator control room, discovered on 3/11/88, was installed by E&DCR C26873. The 2-inch diameter sleeve contains a 1 and 1/2-inch diameter communications conduit (*CND*). Review of subcontractor records revealed that this penetration was shown as a spare, with no seal required. Remaining penetrations in this fire wall are shown as receiving fire-rated seals. Inspection results of all penetrations installed under E&DCR C26873 (11 total) show the remainder have fire seals installed. There is no apparent explanation for the absence of the required fire seal at this penetration, except for human error.

3. Unsealed penetration and uncoated steel beam, auxiliary building "D" tunnel, elevation 70 feet:

Design of the division II room in "D" tunnel utilized the auxiliary building elevation 95 foot floor framing as the top portion of the south wall of the room. The west wall

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) RIVER BEND STATION	DOCKET NUMBER (2) 0 5 0 0 0 4 5 8 8 8	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		0 0 9	--	0 1	0 6	OF 1 2

TEXT (if more space is required, use additional NRC Form 388A x) (17)

of the room was poured up to the edge of the beam flanges, leaving open the rectangular area between the flanges which was discovered on 3/17/88. This penetration never appeared on any design drawings, and the fire seal subcontractor was never alerted to its presence. Consequently, the opening was never sealed. Additionally, the structural steel member, which comprises the top three feet of the south fire-rated wall, is not qualified as a three hour barrier. Typical firewalls at RBS are 8 inches of reinforced concrete, minimum, similar to rated construction shown in the Underwriters Laboratories (UL) Fire Resistance Directory.

Fire area AB-7 encompasses all of "D" tunnel, with the exception of this division II room in the northeast corner. Figure 9A.2-1 of the RBS Updated Safety Analysis Report (USAR) shows this room is not included in any fire area. Cables in this room are division II cables, feeding from fire area ET-2 to area AB-2/Zone 2. Safe shutdown method 1 (utilizing division I) is used for a fire in either area ET-2 or AB-2, while fire area AB-7 utilizes shutdown method 2 (division II). No reference to this division II room can be found in the fire hazards analysis, indicating the original analysis assumed it a part of an existing fire area, rather than a separate one.

- 4. Inadequately sealed penetrations, reactor building shield wall, elevations 114 and 141 feet:

Investigation of the unsealed annulus penetrations discovered on 3/24/88 shows that both had been previously sealed. It is not known when the breaches were made.

- 5. Inadequate seal around control building door frame, elevation 98 feet:

Examination of door CB98-21R which was discovered to be inadequately sealed around its frame on 4/12/88 indicates that it was originally sealed to the concrete wall, removed and reinstalled without sealing the perimeter opening. This door forms part of the fire rated boundary between fire areas C-13 and C-16. Area C-13 contains HVAC equipment for both divisions, separated by a one hour rated wall. Division II equipment is closest to door CB98-21R. Area C-16 contains division I and II cables with the division II cables protected. Wet pipe sprinklers are provided in area C-13, while area C-16 has smoke detection only.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) RIVER BEND STATION	DOCKET NUMBER (2) 0 5 0 0 0 4 5 8 8 8 - 0 0 9 - 0 1 0 7	LER NUMBER (8)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
					OF	

TEXT (If more space is required, use additional NRC Form 366A (1/77))

6. Communication between fire areas, open hatchway and improperly installed penetration seal:

Investigation and safety consequences of the auxiliary building hatchway, the open trench in 'B' tunnel and the unqualified penetration seal, discovered on 4/14/88, is continuing and will be presented in supplement to this LER.

Corrective action will consist of the following:

1. STP-000-3602, "Fire Barrier Visual Inspection", will be reviewed to ensure it adequately represents plant design.
2. Detailed training will be provided to individuals performing this STP.
3. The STP will be performed using qualified personnel with appropriate levels of supervision.
4. Qualified fire watches are established and will be maintained and a plan for required sealing of any penetrations which may be found by the performance of the STP will be implemented.
5. All site personnel have been informed by memorandum to be aware of any openings in floors or walls during performance of their routine activities.

Additional management and supervisory attention is being placed on the performance of the STP to ensure a detailed walkdown is completed. Completion of this STP is scheduled within 90 days of approval of the new revision which is scheduled to be approved by 5/31/88; however, in high radiation areas an outage will be required for the total completion of the STP.

Additional corrective action will include protecting the structural steel beam in "D" tunnel to maintain the wall rating. The fire hazards analysis and USAR will be revised, as required, to incorporate the division II room into the appropriate fire area.

A review of previously submitted LERs from River Bend Station revealed a similar condition of two unsealed penetrations in cubicle 'B' for the spent fuel pooling cooling (*DA*) pump (*P*) reported in LER 87-021. These penetrations were not in a "typical" wall. The penetration seal contractor, utilizing "typical" penetration drawings, was unaware of them and failed to seal them.

River Bend Station's LER 86-038 reported a similar condition of omitted fire seals. These were the result of the proper deletion of the radiation sealing requirements causing the sealing contractor to

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) RIVER BEND STATION	DOCKET NUMBER (2) 0500045888	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	OF	12
		88	009	010		

TEXT (if more space is required, use additional NRC Form 386A's) (17)

additionally delete the fire sealing requirements. Fifty-six additional unsealed conduits were sealed as a result of corrective action reported in LER 86-038.

An earlier report, LER 86-036, described improperly installed "one-shot" conduit seals. These "one-shot" seals were not installed per configurations that were fire tested by the installation subcontractor.

The above mentioned similarly reported LERs will be reviewed for applicability to the corrective action program for the condition reported here.

SAFETY CONSEQUENCES

The six situations identified have been analyzed for safety consequences as follows:

1. Unsealed penetration, control building wall, elevation 70 feet:

The first opening, found is in the wall separating control building fire areas C-4 and C-5. Area C-4 contains unit coolers (*AHU*) 1HVC*ACU2A and 1HVC*ACU2B while area C-5 contains divisional and non-divisional cable in cable trays (*TY*). Both areas have fire detection and suppression installed, a water spray (deluge) system in area C-5 and a wet pipe automatic sprinkler system in area C-4. The 'A' and 'B' unit coolers serve the standby switchgear rooms and cable chase areas and each is sized for 100 percent of the required capacity. The redundant unit coolers are further protected from fire damage by a one hour firewall between the A and B divisions. The open penetration is in the area occupied by 1HVC*ACU2B. The fire load presented by the unit coolers is negligible, so a fire in the area of 1HVC*ACU2B would have no effect on the cabling in fire area C-5.

A fire in area C-5 could admit smoke and hot gases to the area around unit cooler 1HVC*ACU2B. Deluge system actuation in area C-5 would greatly limit any heat or combustion products and smoke alone would not be sufficient to disable the unit cooler. Conservatively assuming 1HVC*ACU2B was lost due to the effects of a fire in area C-5, the redundant unit cooler 1HVC*ACU2A would be available if required.

2. Unsealed penetration diesel generator building wall, elevation 98 feet:

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) RIVER BEND STATION	DOCKET NUMBER (2) 0 5 0 0 0 4 5 8 8 8 - 0 0 9 - 0 1 0 9 OF 1 2	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		

TEXT (if more space is required, use additional NRC Form 366A z) (17)

Concerning the second reported penetration, the major fire hazard in the diesel generator area is the diesel fuel and lubricating oil present in and around the engine. A fire in either of the affected diesel rooms would be of the same intensity (approximately a 45 minute fire). Fire detection is installed in the diesel rooms for actuation of the preaction sprinkler system and in the control rooms for alarm only. Curbs are provided along the DE-line door openings for fuel oil spill retention.

A diesel generator control room fire alone would be insufficient to cause any significant heat or buildup of combustion products to communicate to the adjacent control room. A fire occurring in the diesel room would cause large amounts of heat and smoke; however the location of this opening in relation to the postulated fire and the relative size (1/4 inch annulus) indicate no detrimental effect would be seen in the adjacent control room. Smoke and heat from a diesel fire would emerge from the fresh air vents on the east side of the building and from roof penetrations, which are not fire rated. The small amount of smoke introduced into the adjacent area from this penetration would be far less than that which would occur during manual firefighting activities, such as opening doors, laying hose, and ventilating. There is no effect on safety due to this penetration. Redundant equipment would be unaffected by fires in adjacent areas.

3. Unsealed penetration and uncoated steel beam, auxiliary building "D" tunnel, elevation 70 feet:

The physical layout of the auxiliary building "D" tunnel area has one stack of 7 cable trays 1 foot 9 inches south of the division II room's south wall. The top tray elevation is approximately 1 and 1/2 inches below the bottom of the W36X182 beam. The top tray carries 13.8 kV feeds. The division II room and contents are at risk from two possible fire events. First a fire in the nearby cable tray stack, particularly in the top tray, could impart a significant amount of heat and combustion products in the division II room area, through the structural steel beam on the south side and the attendant opening at the southwest corner. Second, a fire elsewhere in the "D" tunnel area could introduce smoke and hot gases into the room. A fire inside the division II room would have less effect on the surrounding "D" tunnel area, due to the lower amount of combustibles and the considerably greater distance from the combustibles to the south wall. The effect of the most severe event, a fire in the cable tray stack south of the

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) RIVER BEND STATION	DOCKET NUMBER (2) 0500045888-009-01	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
					1	0 OF 1 2

TEXT (if more space is required, use additional NRC Form 388A-2) (17)

division II room, this analysis envelopes the effects of a fire inside the room.

RBS used IEEE 383-1974 qualified cables exclusively in the power block, except for minor items such as lighting cords. All cables have passed 400,000 BTU/hour test as well as the required 70,000 BTU/hour flame tests and were shown to be self extinguishing. Cable tray separation is in accordance with Reg. Guide 1.75 and IEEE 384-1974, except where otherwise qualified. Testing has shown that for cable trays separated by 9 inches or more, a worst case electrical fault resulting in a fire would have no effect on the adjacent trays. Also, the same testing shows that a faulted cable at 1280 degrees F imparts a temperature of 98 degrees F on a target cable, less than 4 inches away. These test results indicate that a cable tray fire 1 foot 9 inches away from the steel beam would have little effect on the steel temperature and no effect on the tray below. Therefore, heat conducted into the division II room would be minimal, with no effect on the cabling. Smoke admitted to this area through the open penetration would also have no effect on cabling. Smoke and heat originating from a fire in the division II room would be admitted to the AB-7 fire area. Heat production would be minimal as the room arrangement has placed most cable trays near the north side of the room, away from the south side steel framing. The majority of equipment in area AB-7 is at floor level, remote from any potential smoke effect. The nearest MOV is 1E12*MOV068B at elevation 86 feet 9 inches. This valve is also division II equipment. Were it disabled, no effect would be felt at the division I redundant valve, over 50 feet away.

The division II room and area AB-7 share a common detection and water spray deluge suppression system. A fire sensed in either area would initiate the suppression system for both. Regardless of where the fire occurred, the redundant division would receive the cooling effect of the water spray system. There is no effect on cabling due to water, as cable at RBS is rated to perform while submerged. The MOVs in area AB-7 are also rated for water spray conditions. Therefore, a fire due to fixed or transient combustibles in either division would be detected and suppressed, while protecting the alternate division. No adverse effect due to water spray on the redundant equipment is postulated.

- Inadequately sealed penetrations, reactor building shield wall, elevations 114 and 141 feet:

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) RIVER BEND STATION	DOCKET NUMBER (2) 0 5 0 0 0 4 5 8	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		8 8	- 0 0 9	- 0 1	1 1	1 OF 1 2

TEXT (if more space is required, use additional NRC Form 366A (7/77))

Technical Specification 1.39(F) (definition for secondary containment integrity - operating) requires all sealing mechanisms associated with annulus penetrations to be operable, i.e. sealed. Technical Specification section 3.6.5.1 requires operating pressures of -3, 0.0, and 0.0 inches W.G. be maintained in the annulus, auxiliary and fuel building respectively; and standby gas treatment and fuel building ventilation subsystem will draw down the secondary containment to the required negative pressures. No reference in Technical Specifications is made of those annulus penetrations without mechanical closures, such as those containing fire/air rated penetration seal material. Technical Specification bases and the applicable USAR sections (6.2; 6.5) require a negative annulus pressure of -3 inches W.G. to be maintained in the annulus for normal operation, assuming a 2000 CFM leakage rate. Upon an accident initiation, an annulus at -3 inches W.G., 2000 CFM leakage can draw down to -0.25 inches W.G. in the required time frame. STP-257-0601, the SGTS operability test, verifies the design base is satisfied. This test was last performed satisfactorily 12/17/87 and is typically done at each outage.

It is not known when these two penetrations were breached. However, with the annulus pressure at -3.9 inches W.G., the design basis is satisfied by providing an initial condition equal to or slightly more conservative than original design assumptions. Presence of these openings has no impact on 10CFR100 offsite releases. Note as well any leakage would be secondary containment to secondary containment. Design basis for secondary containment is satisfied with the penetrations open.

Fire loading on either side of the shield building in these areas is extremely low. No safety equipment is located in the annulus (USAR P.6.2-68), so an auxiliary building fire communicating with the annulus would have no effect on safe shutdown. Fires occurring in the annulus would be almost unnoticeable in the auxiliary building due to the low fire load and negative annulus pressure. The divisions are located on opposite sides of the containment and auxiliary building, so no single fire event could impact both divisions.

- 5. Inadequate seal around control building door frame, elevation 98 feet:

Review of applicable fire door specifications - NFPA 252; UL108; ASTM E-152; NFPA 80 - show that fire doors are permitted to have substantial gaps between the frame and

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) RIVER BEND STATION	DOCKET NUMBER (2) 0 5 0 0 0 4 5 8 8 8 - 0 0 9 - 0 1 1 2 OF 1 2	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		

TEXT (if more space is required, use additional NRC Form 366A's) (17)

the door, or the door and the sill. Allowable gaps range from 1/8 inches to 3/4 inches. Fire door testing allows these gaps along with the attendant passage of combustion products and periods of flaming outside the fire test furnace, on the door itself. The acceptance criteria requires that the door remains closed during the test and deflects no more than 1 door thickness during the fire and hose stream tests. Door frames shall not permit through openings. Considering the low fire loading in these areas-area C-16 has a 17 minute design base fire while area C-13 has a 6 minute design base fire and with the suppression available in area C-13, no effect would be felt due to this perimeter crevice. The door would remain closed. Structurally, the integrity of the door is not at risk as the door anchorage would equilibrate in temperature over the time of the test or fire exposure. Passage of combustion products would not substantially differ from that permitted in acceptable fire door installations.

- 6. Communication between fire areas, open hatchway and improperly installed penetration seal:

Investigation and safety consequences of the auxiliary building hatchway, the open trench in 'B' tunnel and the unqualified penetration seal, discovered on 4/14/88, is continuing and will be presented in supplement to this LER.

Analysis performed to date of all penetrations found shows no safety significance can be attributed to these openings. There is no effect on the ability to safely shut down the plant. The health and safety of the public was never at risk.

NOTE: Energy Industry Identification System Codes are identified in the text as (*XX*).



GULF STATES UTILITIES COMPANY

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

AREA CODE 504 635-6094 346-8651

April 29, 1988

RBG-27783

File Nos. G9.5, G9.25.1.3

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

Gentlemen:

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

Please find enclosed Licensee Event Report No. 88-009 Revision 1 for River Bend Station - Unit 1. This revision is being submitted pursuant to 10CFR50.73 to provide additional information on corrective actions.

Sincerely,

J. E. Booker
to file

J. E. Booker
Manager - River Bend Oversight
River Bend Nuclear Group

PDR by RRS
JEB/TFP/ADF/RRS/ch

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

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

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

IER2
11