GULF STATES UTILITIES COMPANY

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

AREA CODE 504 635-6094 346-8651

July 8, 1985
RBG-21506
File No. G9.5

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Denton:

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

Enclosed for your review is a revision to the River Bend Station Final Safety Analysis Report (FSAR) Section 12.3. This revision modifies the radiation zone on the west side of the condenser due to streaming. This revision may affect the SER discussion on Page 12-5, but no impact is expected on the proposed Technical Specifications. This revision will be included in a future FSAR amendment.

Sincerely,

J. E. Booker

J. E. Booker
Manager-Engineering,
Nuclear Fuels & Licensing
River Bend Nuclear Group

JEB/ERG/je

Enclosure

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in the annulus is plugged with a 5 1/2-ft-thick, solid concrete block to maintain the radiation levels in the area within the zoning requirements. The seismic shake spaces between the steel containment and the structures inside and outside the containment are shielded by steel plates. Fig. 12.3-11 shows the reactor building areas through which the spent fule transfer tube passes.

RBS radiation zone maps identify the maximum expected total radiation levels during operations and refueling with consideration given toward maintaining personnel exposure as low as is reasonably achievable and within the standards of 10CFR20. The zone maps show all the routinely visited areas such as reactor water cleanup (Figure 12.3-4, el 162'-3"), 11 standby liquid control areas (Figure 12.3-3, el 141"-0"), TIP Station (Figure 12.3-2, el 98'-0"), CRD hydraulic control unit (Figure 12.3-4, el 114'-0"), and containment personnel airlocks (Figure 12.3-4, el 114'-0" and el 162'-3"). These zone radiation levels include contributions from any potential streaming through the drywell shield wall penetration.

Turbine Building

The anticipated major radiation source in the turbine building is the primary steam containing activation gases, principally N-16, and fission products. Radiation shielding is provided around the following equipment in order to ensure that the required access zone radiation limits are met around the shielded areas:

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1. Main condenser
2. Feedwater heaters and drain receiver tanks
3. Steam air ejectors
4. Steam extraction piping
5. Off gas equipment and piping
6. Condensate demineralizers and regeneration facilities
7. Steam seal evaporator
8. Turbines
9. Radwaste steam reboiler

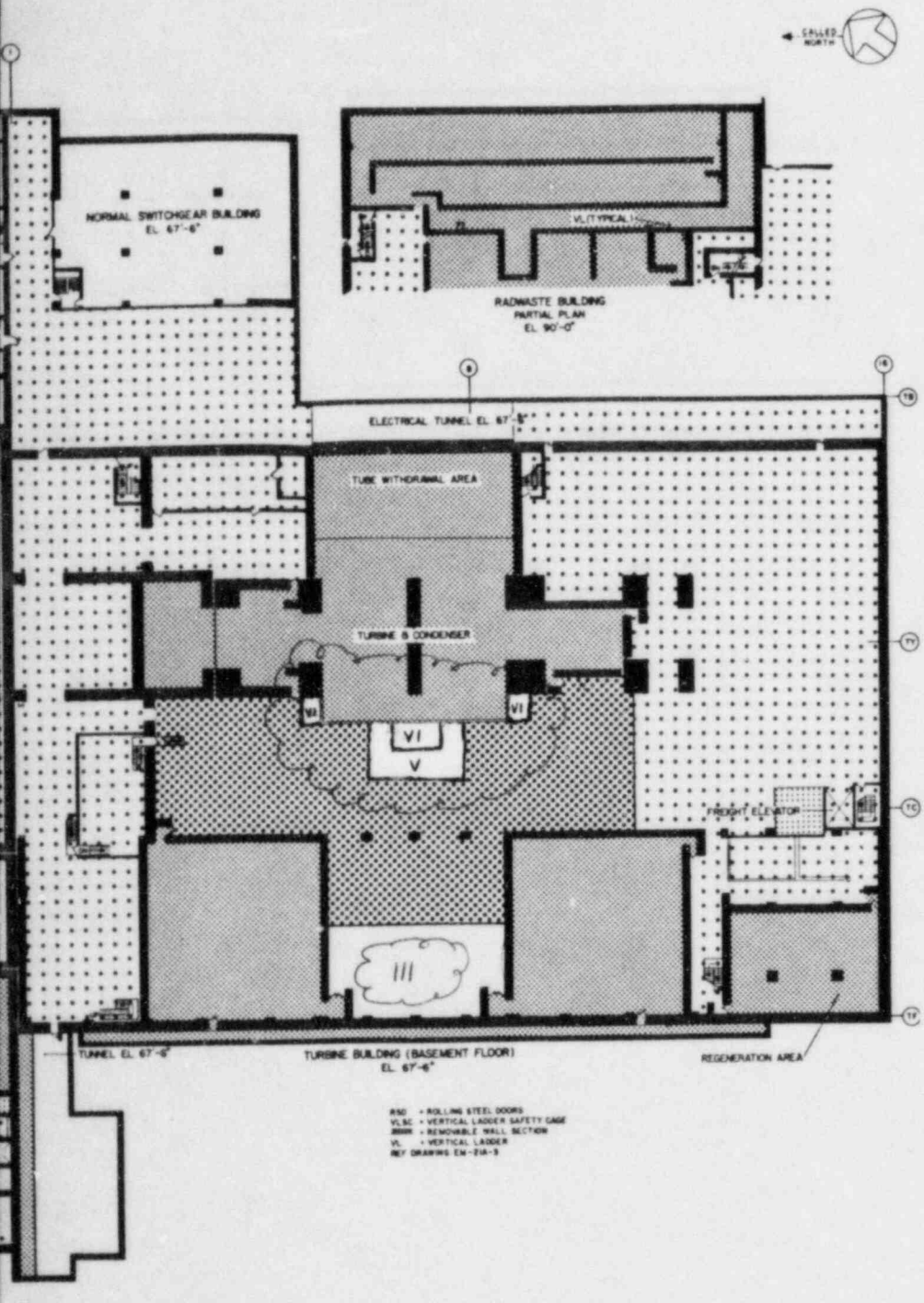
10. Moisture separator/heaters.

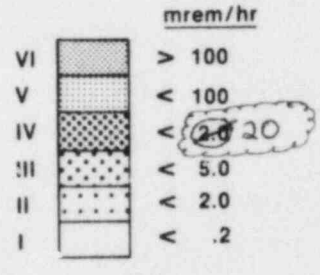
Areas within these shields are high-radiation zones and have limited access.

In the vicinity of the west side of the condenser there are localized areas where the dose rate is estimated to be greater than 100 mrem/hr. The actual dose rate may be less than 100 mrem/hr. The actual dose rate may be less than 100 mrem/hr if the expected (50 uCi/gm) rather than the design value (100 uCi/gm) of N-16 concentration in main steam is used in evaluating the condenser source. If during operation the dose rate is indeed found to be greater than 100 mrem/hr, then additional shielding will be installed or administrative access control will be implemented. 21

Auxiliary and Radwaste Buildings

Concrete walls, removable blocks, labyrinths, and pipe chases are used to shield the safety feature equipment in the auxiliary building and process equipment in the radwaste building, including valves and piping, in accordance with general guides of Section 12.3.2.2.1. Radiation limits are specified for all access zones, and shielding is provided as necessary to maintain the zones within these limits.





NOTE:
1. STRIPED AREAS INDICATE THAT THE ZONE DESIGNATION VARIES DEPENDING ON PLANT OPERATING MODE (i.e. NORMAL OR REFUELING)

FIGURE 12.3-1

RADIATION ZONES — PLA
EL. 65'-0" TO 67

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