November 20, 1990

Docket No. 50-458

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Gulf States Utilities
ATTN: Mr. James C. Deddens
Senior Vice President (RBNG)
Post Office Box 220
St. Francisville, Louisiana 70775

Dear Mr. Deddens:

SUBJECT: RIVER BEND STATION, UNIT 1 - AMENDMENT NO. 51 TO FACILITY OPERATING LICENSE NO. NPF-47 (TAC NO. 77747)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 51 to Facility Operating License No. NPF-47 for the River Bend Station, Unit 1. The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated October 12, 1990.

The amendment revised TS Table 3.8.4.1-1, "Primary Containment Penetration Conductor Overcurrent Protection Devices," Sections C.1 and C.4 to reflect the removal of a load from Section C.1 and the addition of the load to Section C.4. The new circuit breaker in Section C.4 will provide primary containment penetration conductor overcurrent protection for the larger Reactor Water Cleanup (RWCU) precoat pump which is being installed to improve RWCU filter and system performance.

A copy of our Safety Evaluation is enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

Original Signed By

Claudia M. Abbate, Project Manager
Project Directorate IV-2
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 51 to NPF-47
2. Safety Evaluation

cc w/enclosures:
See next page

*SEE PREVIOUS CONCURRENCES

CP-1

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Document Name: RB AMENDMENT/TABLE 3.8.4.11

DF01

cc w/enclosures:
Mark Wetterhahn, Esq.
Bishop, Cook, Purcell & Reynolds
1401 L Street, N.W.
Washington, D.C. 20005

Mr. Les England
Director - Nuclear Licensing
Gulf States Utilities Company
P. O. Box 220
St. Francisville, Louisiana 70775

Mr. Philip G. Harris
Cajun Electric Power Coop. Inc.
10719 Airline Highway
P. O. Box 15540
Baton Rouge, Louisiana 70895

Senior Resident Inspector
P. O. Box 1051
St. Francisville, Louisiana 70775

President of West Feliciana
Police Jury
P. O. Box 1921
St. Francisville, Louisiana 70775

Regional Administrator, Region IV
U.S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011

Mr. J. E. Booker
Manager-Nuclear Industry Relations
P. O. Box 2951
Beaumont, Texas 77704

Mr. Glenn Miller, Administrator
Radiation Protection Division
Office of Environmental Affairs
P. O. Box 14690
Baton Rouge, Louisiana 70898

Mr. J. David McNeill, III
William G. Davis, Esq.
Department of Justice
Attorney General's Office
P. O. Box 94095
Baton Rouge, Louisiana 70804-9095

Ms. H. Anne Plettinger
3456 Villa Rose Drive
Baton Rouge, Louisiana 70806

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

GULF STATES UTILITIES COMPANY

DOCKET NO. 50-458

RIVER BEND STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 51
License No. NPF-47

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Gulf States Utilities Company (the licensee) dated October 12, 1990, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C.(2) of Facility Operating License No. NPF-47 is hereby amended to read as follows:

   (2) Technical Specifications and Environmental Protection Plan

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 51 and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. GSU shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. The license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

E V Imbro

Eugene V. Imbro, Acting Director
Project Directorate IV-2
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: November 20, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 51

FACILITY OPERATING LICENSE NO. NPF-47

DOCKET NO. 50-458

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain a vertical line indicating the area of change. The overleaf pages are provided to maintain document completeness.

REMOVE	INSERT
3/4 8-29	3/4 8-29
3/4 8-32	3/4 8-32

TABLE 3.8.4.1-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTION DEVICES

C. 480 VAC Molded Case Circuit Breakers

1. Gould Circuit Breaker Type A821 with Gould Starter/Controller Type FVNR Size 1

Location	Cubicle	Equip. No.
1EHS*MCC2A	2B	1CPM*FN1A
1EHS*MCC2B	2B	1CPM*FN1B
1NHS-MCC2A	2A	1C41-D002
1NHS-MCC2A	3C	1DER-P1A
1NHS-MCC2A	3D	1DER-P2A
1NHS-MCC2A	4D	1DFR-P2A
1NHS-MCC2A	4E	1DFR-P1A
1NHS-MCC2A	6E	1HVR-FN1A
1NHS-MCC2B	4C	1DER-P1B
1NHS-MCC2B	5C	1DER-P2B
1NHS-MCC2B	6B	1DFR-P2B
1NHS-MCC2B	6C	1HVR-FN1D
1NHS-MCC2C	1E	1B33-C001AH
1NHS-MCC2D	3B	1B33-C001BH
1NHS-MCC2E	2C	1HVR-FN1C
1NHS-MCC2E	3B	1G36-C001A
1NHS-MCC2E	4D	1WCS-P5A
1NHS-MCC2E	4E	1B33-D003A2
1NHS-MCC2E	6C	1B33-D003A5
1NHS-MCC2E	1C	1G36-A001AG
1NHS-MCC2F	3B	1G36-C001B
1NHS-MCC2F	3C	1HVR-FN1B
1NHS-MCC2F	4A	1DFR-P1B
1NHS-MCC2F	5A	1WCS-P5B
1NHS-MCC2F	5C	1B33-D003B5
1NHS-MCC2F	6B	1B33-D003B2
1NHS-MCC2F	6C	1G36-A002AG
1NHS-MCC8A	2E	1F42-D002
1NHS-MCC8A	3E	1DFR-P6A
1NHS-MCC8B	3C	1DFR-P6B
1NHS-MCC102B	3A	1CPP-FN1

TABLE 3.8.4.1-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTION DEVICES

C. 480 VAC Molded Case Circuit Breakers (Continued)

2. Gould Circuit Breaker Type A822 with Gould Starter/Controller Type FVR Size 1

Location	Cubicle	Equip. No.
1EHS*MCC2A	2A	1C41*MOVF001A
1EHS*MCC2A	5A	1SWP*MOV4A
1EHS*MCC2A	5B	1SWP*MOV5B
1EHS*MCC2A	5C	1SWP*MOV502A
1EHS*MCC2A	6A	1RCS*MOV58A
1EHS*MCC2A	6B	1RCS*MOV59A
1EHS*MCC2A	6C	1SWP*MOV503A
1EHS*MCC2B	1B	1SFC*MOV120
1EHS*MCC2B	1D	1SFC*MOV139
1EHS*MCC2B	2A	1C41*MOVF001B
1EHS*MCC2B	5A	1SWP*MOV4B
1EHS*MCC2B	5B	1SWP*MOV5A
1EHS*MCC2B	5C	1SWP*MOV502B
1EHS*MCC2B	6A	1RCS*MOV58B
1EHS*MCC2B	6B	1RCS*MOV59B
1EHS*MCC2B	6C	1SWP*MOV503B
1EHS*MCC2C	1D	1CCP*MOV142
1EHS*MCC2C	2C	1CCP*MOV143
1EHS*MCC2C	2D	1CPM*MOV1A
1EHS*MCC2C	3A	1CPM*MOV2A
1EHS*MCC2C	3B	1CPM*MOV3A
1EHS*MCC2C	3C	1E12*MOVF037A
1EHS*MCC2C	4A	1E12*MOVF042A
1EHS*MCC2C	4B	1HVN*MOV22A
1EHS*MCC2C	4C	1RCS*MOV60A
1EHS*MCC2C	5B	1RCS*MOV61A
1EHS*MCC2C	5C	1CPM*MOV4A
1EHS*MCC2D	1C	1B21*MOVF016
1EHS*MCC2D	1D	1CPM*MOV1B
1EHS*MCC2D	2C	1CPM*MOV2B
1EHS*MCC2D	2D	1CPM*MOV3B
1EHS*MCC2D	3A	1CPM*MOV4B
1EHS*MCC2D	3B	1CPP*MOV104
1EHS*MCC2D	3C	1E51*MOVF063
1EHS*MCC2D	4A	1E51*MOVF076
1EHS*MCC2D	4B	1G33*MOVF001
1EHS*MCC2D	4C	1G33*MOVF028
1EHS*MCC2D	5A	1WCS*MOV178
1EHS*MCC2K	1D	1CCP*MOV144
1EHS*MCC2K	2A	1RCS*MOV60B
1EHS*MCC2K	2B	1RCS*MOV61B
1EHS*MCC2K	2C	1HVN*MOV22B

TABLE 3.8.4.1-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTION DEVICES

C. 480 VAC Molded Case Circuit Breakers (Continued)

2. Gould Circuit Breaker Type A822 with Gould Starter/Controller Type FVR Size 1 (Continued)

Location	Cubicle	Equip. No.
1EHS*MCC2K	3D	1E12*MOVF042B
1EHS*MCC2K	4A	1E12*MOVF009
1EHS*MCC2K	4D	1G33*MOVF053
1EHS*MCC2K	5A	1G33*MOVF040
1EHS*MCC2K	6C	1HVN*MOV102
1EHS*MCC2K	6D	1E12*MOVF037B
1EHS*MCC2K	7D	1CCP*MOV158
1NHS-MCC2A	1C	1B21-MOVF001
1NHS-MCC2A	1D	1B33-MOVF023A
1NHS-MCC2A	5C	1G33-MOVF102
1NHS-MCC2A	5D	1B33-MOVF067A
1NHS-MCC2A	7D	1G33-MOVF106
1NHS-MCC2B	3B	1G33-MOVF042
1NHS-MCC2B	3C	1B21-MOVF002
1NHS-MCC2B	4D	1G33-MOVF044
1NHS-MCC2B	5D	1G33-MOVF100
1NHS-MCC2B	6D	1G33-MOVF101
1NHS-MCC2D	2E	1B21-MOVF005
1NHS-MCC2D	3D	1B33-MOVF067B
1NHS-MCC2D	4D	1B33-MOVF023B
1NHS-MCC2E	3A	1G33-MOVF031
1NHS-MCC2E	5E	1G33-MOVF107
1NHS-MCC2F	2D	1G33-MOVF104
1NHS-MCC8A	4E	1C11-MOVF003

3. Gould Circuit Breaker Type HE43

1NHS-MCC2A	2B	1POP-WR2G01
1NHS-MCC2A	2C	1POP-WR2A01
1NHS-MCC2A	2D	1POP-WR2A02
1NHS-MCC2A	3B	1POP-WR2G02
1NHS-MCC2C	1CT	1H22-PNLP008
1NHS-MCC2D	5C	1POP-WR2D01
1NHS-MCC2D	5D	1POP-WR2D02
1NHS-MCC8A	1E	1F15-E006
1NHS-MCC8A	2D	1F15-E005
1NHS-MCC8A	4C	1F11-E012
1NHS-MCC8A	6B	1FNR-P06
1NHS-MCC8A	6C	1FNR-P08
1NHS-MCC8B	2A	1FNR-P07
1NHS-MCC2F	2A	1POP-WR2F01
1NHS-MCC2F	2B	1JRB-EL1A
1NHS-MCC2E	3C	1MHR-CRN2
1NHS-MCC2A	3A	1FNR-P09
1NHS-MCC2A	4A	1FNR-P10
1NHS-MCC2B	1C	1FNR-P11
1NHS-MCC8A	3D	1MHR-CRN3

TABLE 3.8.4.1-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTION DEVICES

C. 480 VAC Molded Case Circuit Breakers (Continued)

4. Gould Circuit Breaker Type A80 with Gould Starter/Controller Type FVNR Size 3

Location	Cubicle	Equip. No.
1EHS*MCC2A	2C	1C41*C001A
1EHS*MCC2B	2C	1C41*C001B
1NHS-MCC2B	2D	1C41*D003
1NHS-MCC2E	1D	1B33-D003A1
1NHS-MCC2E	6D	1B33-D003A4
1NHS-MCC2F	4D	1B33-D003B1
1NHS-MCC2F	6D	1B33-D003B4
1NHS-MCC2D	1E	1G36-C002

5. Gould Circuit Breaker Type A80 with Gould Starter/Controller Type 2SP1W Size 4

1NHS-MCC102A	1C	1DRS-UC1A
1NHS-MCC102A	2C	1DRS-UC1C
1NHS-MCC102A	3B	1DRS-UC1E
1NHS-MCC102B	1C	1DRS-UC1B
1NHS-MCC102B	2C	1DRS-UC1D
1NHS-MCC102B	3B	1DRS-UC1F

6. Gould Circuit Breaker with Type A821 Gould Starter/Controller Type FVNR Size 2

1NHS-MCC8B	1D	1F42-E001

D. Air Circuit Breakers - GE Type ARR

Location	Device No.	Location	Device No.	Equip. No.
1EJS*LDC2B	ACB79	1EJS*LDC2B	ACB78	1HVR-UC1C
1EJS*LDC2A	ACB36	1EJS*LDC2A	ACB38	1HVR*UC1A
1EJS*LDC2A	ACB22	1EJS*LDC2A	ACB38	1MHR*RN1C
1EJS*LDC2B	ACB76	1EJS*LDC2B	ACB78	1HVR*UC1B
1EJS*LDC2A	ACB23	1HCS*PWRS1A	Int. Fuse	1HCS*RBNR1A
1EJS*LDC2B	ACB63	1HCS*PWRS1B	Int. Fuse	1HCS*RBNR1B

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 51 TO FACILITY OPERATING LICENSE NO. NPF-47

GULF STATES UTILITIES COMPANY

RIVER BEND STATION, UNIT 1

DOCKET NO. 50-458

INTRODUCTION

By letter dated October 12, 1990, Gulf States Utilities Company (GSU) (the licensee) requested an amendment to Facility Operating License No. NPF-47 for the River Bend Station (RBS), Unit 1. The proposed amendment would modify Technical Specification (TS) Table 3.8.4.1-1, "Primary Containment Penetration Conductor Overcurrent Protection Devices," Sections C.1 and C.4 to reflect the removal of load 1G36-C002, location 1NHS-MCC2E, cubicle 2B from Section C.1 and the addition of the load to location 1NHS-MCC2D, cubicle 1E in Section C.4.

The Reactor Water Cleanup (RWCU) system is designed to maintain reactor water quality by filtration and ion exchange. For the past two operating cycles the RBS has been experiencing poor RWCU system performance. As a result, the licensee identified a number of enhancements to improve RWCU system performance. One area of improvement the licensee has identified deals with the precoat on the filter demineralizers. The licensee determined a greater precoat flowrate would improve filter performance. A larger RWCU precoat pump motor is needed to meet this increased flowrate. The RWCU precoat pump is not safety-related, but is located in containment, therefore, the power supply containment penetration must be protected to ensure no loss of containment integrity occurs. Because of the larger motor, a larger protection breaker could not be installed in panel INHS-MCC2E due to physical size and the electrical load restrictions. Therefore, the proposed amendment requests the associated load in Section C.1 of Table 3.8.4.1-1 be removed and inserted in Section C.4. The new circuit breaker (Gould type 80, FVNR size 3) listed in Section C.4 will provide primary containment penetration conductor overcurrent protection for the larger RWCU pump and necessitates the TS change.

EVALUATION

As designed, the RBS RWCU filter demineralizers are wedgewire type septa with a precoat pump maximum flow capacity of 200 gallons per minute (gpm). In the past, the wedgewire septa has experienced plugging with resin breakthrough. This has resulted in poor RWCU filter demineralizer performance. The wedgewire septa was replaced with porous metal setpa and a new pump impeller was installed which increased the flow rate to 260 gpm, but backwashes, due to high differential pressure, were experienced. Upon further review, the licensee determined that three problems were causing the poor filter performance. The problems are currently being addressed in design

modifications which include: removing a check valve which was plugging; replacing the porous metal septa; designing a new vent system; and increasing the precoat flowrate from 260 gpm to 350-400 gpm by installing a larger pump motor.

The new non-safety-related 50 horsepower, 3500 rotations per minute pump will require a larger protection breaker which could not be installed in the existing panel. Therefore, the load is to be moved from the current load center to a new load center. The new pump will be located in containment and will be powered by non-safety-related power; however, the power cable must pass through a containment penetration. Containment electrical penetrations are part of the primary containment pressure boundary. RBS Safety Analysis Report (SAR) Section 8.3.1.1.4.3 states that containment penetration assemblies are designed to withstand, without loss of mechanical integrity, the maximum fault current versus time condition which could occur because of a single random failure of the circuit overload protective devices. Additionally, no single failure causes excessive current in penetration conductors which could degrade penetration seals and all protective devices automatically disconnect power to the penetration conductors when currents exceed the established protection limits. Electrical penetrations containing 480 volt (V) power circuits are nominally rated to carry 180 percent of full load current continuously with all other circuits in the same penetration operating at full load. Overload protection of the 480 V motor control center power circuits is provided by a series-connected molded case circuit breaker and fuse. Each is rated to open the circuit during overload conditions which provides redundant protection.

The circuit protection design for the larger RWCU pump motor conforms to these SAR requirements. The design for the load to be added to Section C.4 is similar to the existing configurations for the circuits listed in the table. Additionally, the design is in accordance with applicable TS bases and design criteria.

The NRC staff has reviewed the licensee's submittal and has found that the electrical penetration assembly for the larger RWCU precoat pump is designed to withstand, without the loss of mechanical integrity, the maximum available fault current versus time condition that could occur given a single random failure of the circuit overload protective device, as recommended by Regulatory Guide 1.63. Based on its evaluation, the staff also finds that the proposed change is in accordance with Standard Review Plan Section 8.3.1. Therefore, the proposed change is acceptable.

ENVIRONMENTAL CONSIDERATION

The amendment involves a change in a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes in surveillance requirements. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposures. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration and there has

been no public comment on such finding. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Section 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

CONCLUSION

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public. The staff therefore concludes that the proposed changes are acceptable.

Dated: November 20, 1990

Principal Contributor: Claudia M. Abbate, PDIV-2