ENTERGY

Entergy Operations, Inc.
River Bend Station
5485 U.S. Highway 61
P.O. Box 220
St. Francisville, LA 70775
(504) 381-4374
FAX (504) 381-4872

JOHN R. McGAHA, JR.
Vice President
Operations

January 20, 1995

U. S. Nuclear Regulatory Commission
Document Control Desk
Mail Station P1-37
Washington, DC 20555

Subject: River Bend Station - Unit 1
Docket No. 50-458
License No. NPF-47
License Amendment Request (LAR) 95 - 01, Deviation Request,
Fire Area C-17

File Nos.: G9.5, G9.42

RBG-41159
RBF1-95-0018

Gentlemen:

Entergy Operations, Inc., (EOI) hereby submits for NRC review and approval License Amendment Request (LAR) 95-01 pursuant to 10 CFR 50.90. LAR 95-01 requests a deviation from 10 CFR 50, Appendix R, Section III.G.3 with respect to the requirement for a fixed fire suppression system in fire area C-17 in order to credit the remote shutdown system for shutdown in the event of a fire in this fire area.

As discussed in the attachment, the existing design provides an acceptable level of protection to assure that there will be no adverse impact on the ability to achieve and maintain safe shutdown in the event of a fire.

This request has been reviewed and approved by the RBS Facility Review Committee and the Nuclear Review Board.

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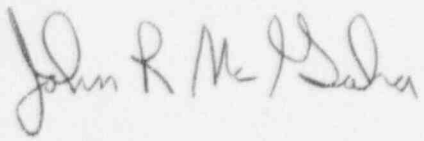
If you have any questions regarding this request or require additional information, please contact me or my staff.

Sincerely,



JRM/JCM/kvm
enclosure

cc: Mr. David Wigginton
U. S. Nuclear Regulatory Commission
M/S OWFN 13-H-15
Washington, DC 20555

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

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

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

BEFORE THE
UNITED STATES NUCLEAR REGULATORY COMMISSION

LICENSE NO. NPF-47

DOCKET NO. 50-458

IN THE MATTER OF
GULF STATES UTILITIES COMPANY
CAJUN ELECTRIC POWER COOPERATIVE AND
ENTERGY OPERATIONS, INC.

AFFIRMATION

I, John R. McGaha, state that I am Vice President-Operations of Entergy Operations, Inc., at River Bend Station; that on behalf of Entergy Operations, Inc., I am authorized by Entergy Operations, Inc. to sign and file with the Nuclear Regulatory Commission, this License Amendment Request 95-01 for the River Bend Station; that I signed this License Amendment Request as Vice President - Operations at River Bend Station of Entergy Operations, Inc.; and that the statements made and the matters set forth therein are true and correct to the best of my knowledge, information, and belief.

John R. McGaha

STATE OF LOUISIANA
WEST FELICIANA PARISH

SUBSCRIBED AND SWORN TO before me, a Notary Public, in and for the Parish and State above named, this 20th day of January, 1995.

(SEAL)

Claudia T. Hurst
Notary Public

My commission expires: with life

ENCLOSURE

ENTERGY OPERATIONS INCORPORATED
RIVER BEND STATION
DOCKET 50-458/LICENSE NO. NPF-47

LAR 95-01
(FIRE AREA C-17)

Document Involved: Fire Hazards Analysis

Item: Fire Area C-17

Reason for Request

For fire area C-17, the original River Bend Station (RBS) Fire Hazards Analysis (FHA) credited either of two shutdown methods depending upon the location of a fire within the fire area. The FHA noted that a fire in fire area C-17 could cause a loss of control building heating, ventilation and cooling (HVAC) and possibly result in the loss of main control room habitability. If main control room habitability was lost, the operators were directed to use the remote shutdown system. A review of the 10 CFR 50.59 evaluation for fire area C-17 revealed that it did not adequately address all aspects of regulatory guidance for fire protection in that it did not include a discussion of the lack of a fixed fire suppression system in the fire area. Licensee Event Report (LER) 94-001, incorporated herein by reference, reported, in part, the deficiencies in fire barrier separation in fire area C-17 for redundant trains of control building HVAC.

A brief review of the RBS licensing basis for fire protection is useful in understanding the reason for this License Amendment Request (LAR). The RBS construction permit application was docketed on September 24, 1973. As a result, the applicable regulatory guidance for fire protection at RBS is Appendix A to BTP APCSB 9.5-1, "Guidelines for Fire Protection for Nuclear Power Plants Docketed Prior to July 1, 1976." RBS compliance with Appendix A to BTP APCSB 9.5-1 is documented in Appendix 9A to the RBS Safety Analysis Report (SAR).

Appendix R was published on November 19, 1980, and applies to plants licensed to operate before January 1979. RBS received its operating license on August 29, 1985. A letter from the NRC to Gulf States Utilities Company dated October 20, 1981, requested a comparison of the RBS fire protection program to Appendix R requirements. This comparison is documented in Appendix 9B to the SAR. The NRC reviewed the RBS fire protection program and summarized its findings in a safety evaluation report (SER) dated May 1984.

During a special announced NRC inspection on April 1-4, 1985, implementation of the fire protection program and compliance with the requirements of 10CFR50, Appendix R (safe shutdown) per SAR commitments and the SER evaluation were reviewed at RBS. The results are summarized in NRC SSER 3 dated August 1985 as follows:

> On the basis of its evaluation the staff finds that the applicant's fire protection program with approved deviations is in conformance with the guidelines of BTP CMEB 9.5-1, sections III.G, III.J, and III.O of Appendix R to 10CFR50, and GDC 3, and is, therefore, acceptable.

10 CFR 50, Appendix R, Section III.G.3, requires, in part, that alternative shutdown capability be provided for areas where adequate separation of redundant safe shutdown components cannot be provided. In addition, fire detection and a fixed fire suppression system must be installed in the area, room, or zone under consideration. As corrective action for fire area C-17, the use of the remote shutdown system as the method of shutdown for a fire in this area was evaluated. Since fire area C-17 does not have a fixed suppression system, use of the remote shutdown system (classified as "alternative shutdown capability") for a fire in this fire area would deviate from the requirements of 10 CFR 50, Appendix R, Section III.G.3.

Attachment 4, "Fire Protection Program Requirements," to Operating License NPF-47 states, in part:

1. EOI shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report for the facility through Amendment 22 and as approved in the SER dated May 1984 and Supplement 3 dated August 1985 subject to provisions 2 and 3 below.

2. EOI may make no change to the approved fire protection program which would significantly decrease the level of fire protection in the plant without prior approval of the commission. To make such a change EOI must submit an application for license amendment pursuant to 10 CFR 50.90.

3. EOI may make changes to features of the approved fire protection program which do not significantly decrease the level of fire protection without prior commission approval provided (a) such changes do not otherwise involve a change in a license condition or technical specification or result in an unreviewed safety question (see 10 CFR 50.59), and (b) such changes do not result in failure to complete the fire protection program approved by the commission prior to license issuance. EOI shall maintain, in an auditable form, a current record of all such changes, including an analysis of the effects of the change on the fire protection program, and shall make such records available to NRC inspectors upon request. All changes to the approved program shall be reported to the Director of the Office of Nuclear Reactor Regulation, along with the FSAR revisions required by 10 CFR 50.71(e).

Although use of the remote shutdown system for a fire in fire area C-17 provides an acceptable level of protection to assure that there will be no adverse impact on the ability to achieve and maintain safe shutdown, it requires a deviation from the requirements of 10 CFR 50, Appendix R, Section III.G.3. Therefore, pursuant to 10 CFR 50.90, this LAR is submitted to request a deviation from 10 CFR 50, Appendix R, Section III.G.3 with respect to the requirement for a fixed fire suppression system in order to credit the remote shutdown system for shutdown in the

event of a fire in fire area C-17. If granted, this deviation will be reflected in the RBS Safety Analysis Report.

Discussion

Redundant trains of control building HVAC could be lost during a single exposure fire at the 115 ft elevation of the control building, fire area C-17, due to a lack of adequate fire barrier separation for the control room air handling units (1HVC*ACU1A & 1B). The loss of both air handling units would cause the control building chillers (1HVK*CHL1A & 1B) to stop running due to electrical interlocks. The loss of both chillers results in inoperability of the remaining control building air handling units. Loss of the control building HVAC system affects the accredited train of equipment in the main control room, standby switchgear room 1B, and the mechanical equipment room. This loss results in room temperatures exceeding values suitable to maintain equipment operability. Certain equipment in these rooms is needed to achieve post-fire safe shutdown.

The redundant control room air handling units are physically located in the same room approximately 10 feet apart and it would be impractical to relocate the components to another area. The air handling units share ducting for air inlet and discharge to the control room. The redundant air operated dampers that isolate each air handling unit are less than 5 feet apart near the ceiling area. Area wide fire detection is provided in the room. No area suppression is provided between the redundant air handling units. A manually actuated water spray system is provided inside the charcoal filter housing for protection of that system. The combustible loading in the area is relatively low. Various options for resolution of this concern were explored.

The options reviewed include:

1. a plant modification to provide adequate fire barrier separation of the redundant air handling units

2. providing alternative shutdown from outside the affected area

These options are discussed in more detail below.

Option 1 would entail adding a fire barrier between the redundant air handling units in fire area C-17 or adding a fire wrap around the components/cables of concern. The area between the redundant air handling units contains a temperature transmitter panel, numerous seismic supports, and has HVAC ducts passing between the units in the overhead. The space separating the two units is approximately 10 feet wide where no obstructions occur. An additional fire rated wall would be impractical due to the access around the redundant air handling units and the HVAC duct obstructions at the ceiling. This option was rejected because of the impracticality of an additional fire barrier in fire area C-17.

The redundant air handling units are large components that have HVAC ducts at the ceiling level that are installed in tight quarters in relation to the redundant components. Access to

the units would be required to perform routine maintenance. A fire wrap would need a separate fire test performed to document the acceptability on such a large surface area component. The HVAC duct spacing would most likely not allow enough space for proper installation between redundant components. This option was rejected because of the difficulty in performing routine maintenance and impracticality of installation of the fire wrap between redundant HVAC ducting components.

Option 2 assumed the loss of redundant control room air handling units eventually resulting in control room evacuation and alternative shutdown using the remote shutdown system. This option would be for a worst case fire and would be less severe than the immediate control room evacuation caused by a fire within the control room boundary. At least one hour is projected to be available after the loss of the redundant control room air handling units before the temperature would potentially cause equipment inoperability concerns. This would allow operator actions to be taken to shutdown and stabilize the plant before evacuation of the control room. Crediting the remote shutdown system for shutdown in the event of a fire in fire area C-17 requires fixed fire suppression and fire detection in this fire area. Although fire area C-17 does have fire detection, it does not have fixed fire suppression.

The combustible fire loading in fire area C-17 was evaluated to determine if an alternative to areawide fixed fire suppression was viable. The fire loading, per Calculation G13.18.12.2-22, in fire area C-17 is 131,274,500 British Thermal Units (BTU's). The enclosed charcoal filters account for 69,000,000 BTU's of the total fire load. The substantial metal enclosures around the charcoal filters, automatic fire detection, and manually actuated suppression system ensure these filters would not introduce an exposure fire. The Thermo-Lag fire wrap material in the area accounts for 46,340,000 BTU's of the total fire loading. This material is not combustible unless an external heat source of 1000^{0}F is maintained to keep the Thermo-Lag burning. This condition is not reasonable for this fire area, due to the low quantity of remaining combustible material available. The remaining fire loading from electrical motors, electrical cabinets, anti-sweat pipe insulation, and a factor for unidentified combustibles amounts to 15,934,500 BTU's, or 5,713 BTU's per square foot, or a 4 minute fire. Over 75% of this remaining fire loading (11,857,500 BTU's) is a factor added to each area to account for unidentified combustibles. Administrative controls prevent storage of transient combustibles in fire area C-17. Therefore, the realistic amount of available combustibles provides less than a one minute fire loading. Thus, the low fire loading and sparse amount of exposed combustibles compensate for the lack of a fixed fire suppression system.

Regulatory Basis

10 CFR 50, Appendix R, Section III.G.3, requires, in part, that alternative shutdown capability be provided for areas where adequate separation of redundant safe shutdown components cannot be provided. In addition, fire detection and a fixed fire suppression system must be installed in the area, room, or zone under consideration. Fire area C-17 does not have a fixed suppression system.

Fire suppression systems are generally used to limit fire spread, once the heat of the fire opens thermally sensitive sprinklers. The low fire loading and sparse concentration of exposed combustible material in fire area C-17 would limit fire spread. Thus, the low fire loading and sparse amount of exposed combustibles compensate for the lack of a fixed fire suppression system. The addition of a fixed fire suppression system would not result in a significant increase in the level of protection. Therefore, a deviation from 10 CFR 50, Appendix R, Section III.G.3 with respect to the requirement for a fixed fire suppression system in fire area C-17 is appropriate.

Fire Hazards Analysis

NRC Fire Protection Requirements and Guidance that Apply:

NRC SSER 3 dated August 1985 states, in part:

> On the basis of its evaluation the staff finds that the applicant's fire protection program with approved deviations is in conformance with the guidelines of BTP CMEB 9.5-1, sections III.G, III.J, and III.O of Appendix R to 10CFR50, and GDC 3, and is, therefore, acceptable.

10 CFR 50, Appendix R, Section III.G.3, requires, in part, that alternative shutdown capability be provided for areas where adequate separation of redundant safe shutdown components cannot be provided. In addition, fire detection and a fixed fire suppression system must be installed in the area, room, or zone under consideration. The use of the remote shutdown system as the method of shutdown for a fire in fire area C-17 was evaluated. Since fire area C-17 does not have a fixed suppression system, use of the remote shutdown system (classified as "alternative shutdown capability") for a fire in this fire area would deviate from the requirements of 10CFR50, Appendix R, Section III.G.3.

Amounts, Types, Configurations, and Locations of Cable Insulation and Other Combustible Materials:

- All cable is contained in conduit except a small number of exposed air drops to equipment.
- Four instrumentation and control panels
- Four dry type transformers
- Two air conditioning units with one motor each
- Four fans with motors
- One air filter (enclosed fiberglass roll filter)

- Two charcoal filters (each with a manually actuated suppression system)
- Pipe insulation (50 lbs.)
- Thermo-Lag (6620 lbs.)
- Trash can (20 lbs.)
- Hose reel
- Forty gallon electric water heater

Fire Loading and Calculated Fire Severities:

Total combustible loading = 131,274,500 BTU
Total area loading per ft^2 = 47,069 BTU/ft^2
Equivalent fire severity = 0.584 hr. (approx. 35 minutes)

The fire loading, per Calculation G13.18.12.2-22, in fire area C-17 is 131,274,500 BTU's. The enclosed charcoal filters account for 69,000,000 BTU's of the total fire load. The substantial metal enclosures around the charcoal filters, automatic fire detection, and manually actuated suppression system ensure these filters would not introduce an exposure fire. The Thermo-Lag fire wrap material in the area accounts for 46,340,000 BTU's of the total fire loading. This material is not combustible unless an external heat source of 1000^0F is maintained to keep the Thermo-Lag burning. This condition is not reasonable for this fire area, due to the low quantity of remaining combustible material available. The remaining fire loading from electrical motors, electrical cabinets, anti-sweat pipe insulation, and a factor for unidentified combustibles amounts to 15,934,500 BTU's, or 5,713 BTU's per square foot, or a 4 minute fire. Over 75% of this remaining fire loading (11,857,500 BTU's) is a factor added to each area to account for unidentified combustibles. Administrative controls prevent storage of transient combustibles in fire area C-17.

In-situ Fire Hazards:

Motors, instrumentation and control panels, water heater, and transformers.

Automatic Fire Detection and Suppression Capability:

Area wide zone detection is provided by six ionization detectors located in the fire area arranged to alarm locally and in the main control room. There is no area fire suppression capability provided.

The charcoal filter units have thermistor detectors in the charcoal beds that provide alarm functions to the main control room. An individual water spray system manually actuated by the opening of two local valves is provided for each charcoal filter unit.

Layout and Configurations of Safety Trains:

The redundant control room air handling units are physically located in the same room approximately 10 feet apart and it would be impractical to relocate the components to another area. The air handling units share ducting for air inlet and discharge to the control room. The redundant air operated dampers that isolate each air handling unit are less than 5 feet apart near the ceiling area. The area between the redundant air handling units contains a temperature transmitter panel, numerous seismic supports, and has HVAC ducts passing between the units in the overhead. A redundant temperature transmitter panel is also located in the room but is located more than 20 feet away. See attached drawing for room layout.

Reliance On and Qualifications of Fire Barriers, Including Fire Test Results, the Quality of Materials and System, and the Quality of the Installation:

Fire barriers are not relied upon based on use of the remote shutdown system, the fire loading/physical arrangement of the room, and operator actions.

Fire Area Construction (walls, floor, ceiling, dimensions, volume, ventilation, and congestion):

- Poured concrete construction with three hour fire rating and a removable wall section composed of three hour rated solid concrete block
- No congestion
- All area ventilation is lost as a result of fire damage. All ducts exiting the area contain fire dampers at the point where they penetrate a fire barrier.
- The room is approximately 60 ft x 45 ft x 20 ft with a volume of 54,000 cubic feet.

Location and Type of Manual Fire Fighting Equipment and Accessibility for Manual Fire Fighting:

- Hose reel in fire area C-17 just inside north-east door
- Hose reel outside of fire area C-17 in walkway area near north-west door
- Three doors into area

- Three carbon dioxide extinguishers outside the room in the corridor on the south side of the room.

  Note - See attached drawing for general locations

Potential Disabling Effects of Fire Suppression Systems on Shutdown Capability:

- No general area suppression provided
- The charcoal filters have internal water deluge suppression that is collected via hard piped drain lines and directed to the building drain system, minimizing water intrusion into the room.

Availability of oxygen (for example, inerted containment):

Normal air

Alternative or Dedicated Shutdown Capability:

Alternative shutdown capability is available as provided by the remote shutdown system. HVAC for the remote shutdown panel is located in fire area C-4 and would not be damaged by a fire in fire area C-17. Operation of the control building HVAC system from the remote shutdown panel bypasses the logic between the chilled water system and the air handling system. This would allow restart of the HVAC for all areas except the main control room.

Compliance with Current Requirements

An appropriately placed fire barrier would prevent the potential loss of control building HVAC. Therefore, pursuant to RBS Technical Specification 3.7.7, "Fire-Rated Assemblies," fire area C-17 has an inoperable fire barrier. As required by the Technical Specification ACTION statement, an hourly fire watch was verified to be in place for fire area C-17. The fire watch provides compensatory measures for the lack of adequate fire barrier separation of the redundant safe shutdown components located in the fire area. The fire watch will remain in place until final resolution of this issue. Recent housekeeping initiatives provide added assurance that accumulation of combustible material will not occur.

No Significant Hazards Consideration

1) The request does not involve a significant increase in the probability or consequences of an accident previously evaluated.

   The event of concern is a fire in fire area C-17. The low fire loading and sparse concentration of exposed combustible material in fire area C-17 would limit fire spread.

However, for this scenario all equipment in fire area C-17 will be assumed lost. Fire area C-17 contains the air handling units for the main control room envelope. The loss of both air handling units would cause the control building chillers to stop running due to a logic tie requiring air flow through the air handling equipment for the chilled water system to operate during normal operation. The loss of the HVAC system in the control building would cause the main control room and the equipment rooms to begin heating up if exposed to design summer conditions. Operator actions can be accomplished to minimize the heat up rates for the rooms prior to the areas reaching equipment temperature limits. This would allow the operators to begin the shutdown process from the main control room. If the main control room continued to heat up, the operators could accomplish the shutdown using the remote shutdown system. HVAC for the remote shutdown panel is located in fire area C-4 and would not be damaged by a fire in fire area C-17. Operation of the control building HVAC system from the remote shutdown panel bypasses the logic between the chilled water system and the air handling system. This would allow restart of the HVAC system for all areas except the main control room. The scenario would conclude in a manner similar to that described in RBS USAR Appendix 15A, Event 52, "Reactor Shutdown From Outside Main Control Room."

In summary, the probability of a fire occurring in fire area C-17 is not increased. However, if a fire were to occur in fire area C-17 which caused the loss of main control room HVAC, the remote shutdown system would provide an acceptable method of shutdown. The low fire loading and sparse concentration of exposed combustible material in fire area C-17 would limit fire spread. Therefore, this request does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2) The request does not create the possibility of occurrence of a new or different kind of accident from any accident previously evaluated.

The event of concern is a fire in fire area C-17. Fire area C-17 does not have a fixed suppression system as required by 10 CFR 50, Appendix R, Section III.G.3. Fire suppression systems are generally used to limit fire spread, once the heat of the fire opens thermally sensitive sprinklers. The low fire loading and sparse concentration of exposed combustible material in fire area C-17 would limit fire spread. However, for the purpose of event analysis, all equipment in fire area C-17 is assumed lost. Thus, a fire in fire area C-17 is bounded by the same analysis with or without a fixed suppression system in terms of equipment availability.

The proposed method of shutdown for a fire in fire area C-17 will be changed in that the remote shutdown system will be credited. Use of the remote shutdown system is bounded by RBS USAR Appendix 15A, Event 52, "Reactor Shutdown From Outside Main Control Room." The HVAC for the remote shutdown panel is located in fire area C-4 and would be undamaged by a fire in fire area C-17. Operation of the control building HVAC system from the remote shutdown panel bypasses the logic between the chilled water system and

the air handling system. This would allow restart of the HVAC system for all areas except the main control room.

In summary, if a fire were to occur in fire area C-17 which caused the loss of main control room HVAC, the remote shutdown system would provide an acceptable method of shutdown. Since, for the purpose of event analysis, all equipment in fire area C-17 is assumed lost, a fire in fire area C-17 is bounded by the same analysis with or without a fixed suppression system in terms of equipment availability. Therefore, this request does not create the possibility of occurrence of a new or different kind of accident from any accident previously evaluated.

3) The request does not involve a significant reduction in a margin of safety.

In this case, the margin of safety is implicit rather than being explicitly expressed as a numerical value. An implicit margin of safety involves conditions for NRC acceptance. Since the RBS Technical Specification Bases do not specifically address a margin of safety for fire protection, the SAR, the NRC's Safety Evaluation Report (SER), and appropriate other licensing basis documents were reviewed to determine if the proposed change would result in a reduction in a margin of safety. As stated, in part, in Attachment 4 to NPF-47:

> EOI shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report for the facility through Amendment 22 and as approved in the SER dated May 1984 and Supplement 3 dated August 1985 subject to provisions 2 and 3 ....

As discussed in the Reason for Request, SSER 3 dated August 1985 states, in part:

> On the basis of its evaluation the staff finds that the applicant's fire protection program with approved deviations is in conformance with the guidelines of BTP CMEB 9.5-1, sections III.G, III.J, and III.O of Appendix R to 10CFR50, and GDC 3, and is, therefore, acceptable.

Thus, the margin of safety in this case can be defined as conformance with the specified fire protection guidelines. 10 CFR 50, Appendix R, Section III.G.3, requires, in part, that alternative shutdown capability be provided for areas where adequate separation of redundant safe shutdown components cannot be provided. In addition, fire detection and a fixed fire suppression system must be installed in the area, room, or zone under consideration. Since fire area C-17 does not have a fixed suppression system, use of the remote shutdown system for a fire in this fire area would deviate from the requirements of 10 CFR 50, Appendix R, Section III.G.3. However, as discussed previously, the low fire loading and sparse amount of exposed combustibles compensate for the lack of a fixed fire suppression system. There is no adverse impact on the ability to achieve and maintain safe shutdown. Therefore, this request does not involve a significant reduction in a margin of safety.

The RBS fire protection program extends the concept of defense-in-depth to fire protection in fire areas important to safety, with the following objectives:

To prevent fires from starting;

To detect rapidly, control, and extinguish promptly those fires that do occur;

To provide protection for structures, systems, and components important to safety so that a fire that is not promptly extinguished by the fire suppression activities will not prevent the safe shutdown of the plant.

The proposed deviation from 10 CFR 50, Appendix R, Section III.G.3 with respect to the requirement for a fixed fire suppression system in fire area C-17 will still allow the RBS fire protection program to meet these objectives.

Conclusion

The probability of a fire occurring in fire area C-17 is not increased by this request. However, if a fire were to occur in fire area C-17 which caused the loss of main control room HVAC, the remote shutdown system would provide an acceptable method of shutdown. The low fire loading and sparse concentration of exposed combustible material in fire area C-17 would limit fire spread. Therefore, this request does not involve a significant increase in the probability or consequences of an accident previously evaluated. Since, for the purpose of event analysis, all equipment in fire area C-17 is assumed lost, a fire in fire area C-17 is bounded by the same analysis with or without a fixed suppression system in terms of equipment availability. Therefore, this request does not create the possibility of occurrence of a new or different kind of accident from any accident previously evaluated. Use of the remote shutdown system for a fire in fire area C-17 provides an acceptable level of protection even though fire area C-17 does not have a fixed suppression system. There is no adverse impact on the ability to achieve and maintain safe shutdown. Therefore, this request does not involve a significant reduction in a margin of safety. Thus, this request involves no significant hazards.

Environmental Impact Consideration

RBS has reviewed this request against the criteria of 10CFR51.22 for environmental considerations. This regulation allows for a categorical exclusion provided that (i) the amendment involves no significant hazards consideration, (ii) there is no significant change in the amounts of any effluents that may be released offsite, and (iii) there is no significant increase in individual or commutative occupational radiation exposure.

As discussed above, the request is for a deviation from 10 CFR 50, Appendix R, Section III.G.3 with respect to the requirement for a fixed fire suppression system in order to credit the remote

shutdown system for shutdown in the event of a fire in fire area C-17. As explained in the No Significant Hazards Consideration, this request involves no significant hazards.

This request would not impact normal plant operation, and thus, effluents unless a fire were to occur in fire area C-17. Use of the remote shutdown system has been previously evaluated. There would be no significant change in the amounts or types of effluents that may be released offsite as a result of its use for this event. The hypothesized loss of main control room HVAC in the event of a fire in fire area C-17 would not significantly affect the amounts of effluents that may be released offsite.

In the event of a fire in fire area C-17, the lack of a fixed suppression system may require that an individual in the area or the fire brigade extinguish the fire. Typically, the control building contains no radioactive material. Therefore, extinguishing efforts would not impact individual or commutative occupational radiation exposure. Use of the remote shutdown system has been previously evaluated so there is no significant increase in individual or commutative occupational radiation exposure it is credited for this event.

Therefore, RBS concludes that the proposed change meets the criteria given in 10 CFR 51.22(c)(9) for a categorical exclusion from the requirement for an environmental impact statement.

Deviation

If this request is granted, Section 9A.2.5.1 of the RBS SAR will be revised as follows:

> In the event of a fire in fire area C-17, the control building HVAC system may be lost. Plant shutdown may be achieved using the remote shutdown system. Fire area C-17 does not have a fixed fire suppression system as required by 10 CFR 50, Appendix R, III.G.3. However, the low fire loading and sparse amount of exposed combustibles compensate for the lack of a fixed fire suppression system. Habitability at the remote shutdown panel locations would be unaffected by the loss of ventilation equipment located in fire area C-17. Remote shutdown panel areas are served by HVAC equipment located in fire area C-4. (See Reference 1)

The License Amendment will be added to the reference section.

Schedule for Attaining Compliance

As indicated above, RBS is currently in compliance with the applicable Technical Specifications. An appropriately placed fire barrier would prevent the potential loss of control building HVAC. Therefore, pursuant to RBS Technical Specification 3.7.7, "Fire-Rated Assemblies," fire area C-17 has an inoperable fire barrier. As required by the Technical Specification ACTION statement, an hourly fire watch is in place for fire area C-17. The fire watch provides compensatory measures for the lack of adequate fire barrier separation of the redundant safe shutdown components located in the fire area. The fire watch will remain in place until final resolution of this issue. The

requested deviation from 10 CFR 50, Appendix R, Section III.G.3, with respect to the requirement for a fixed fire suppression system for fire area C-17 will allow RBS to credit the remote shutdown system for shutdown in the event of a fire in this fire area. If granted, this deviation will be reflected in the RBS Safety Analysis Report. RBS requests the changes become effective within 60 days of approval.

Notification of State Personnel

A copy of this amendment request has been provided to the State of Louisiana, Department of Environmental Quality - Radiation Protection Division.

References

10 CFR 50, Appendix R, "Fire Protection for Nuclear Power Facilities Operating Prior to January 1, 1979."

Branch Technical Position CMEB 9.5-1, "Guidelines for Fire Protection for Nuclear Power Plants."

Appendix A to BTP APCSB 9.5-1, "Guidelines for Fire Protection for Nuclear Power Plants Docketed Prior to July 1, 1976."

GL 86-10, "Implementation of Fire Protection Requirements."

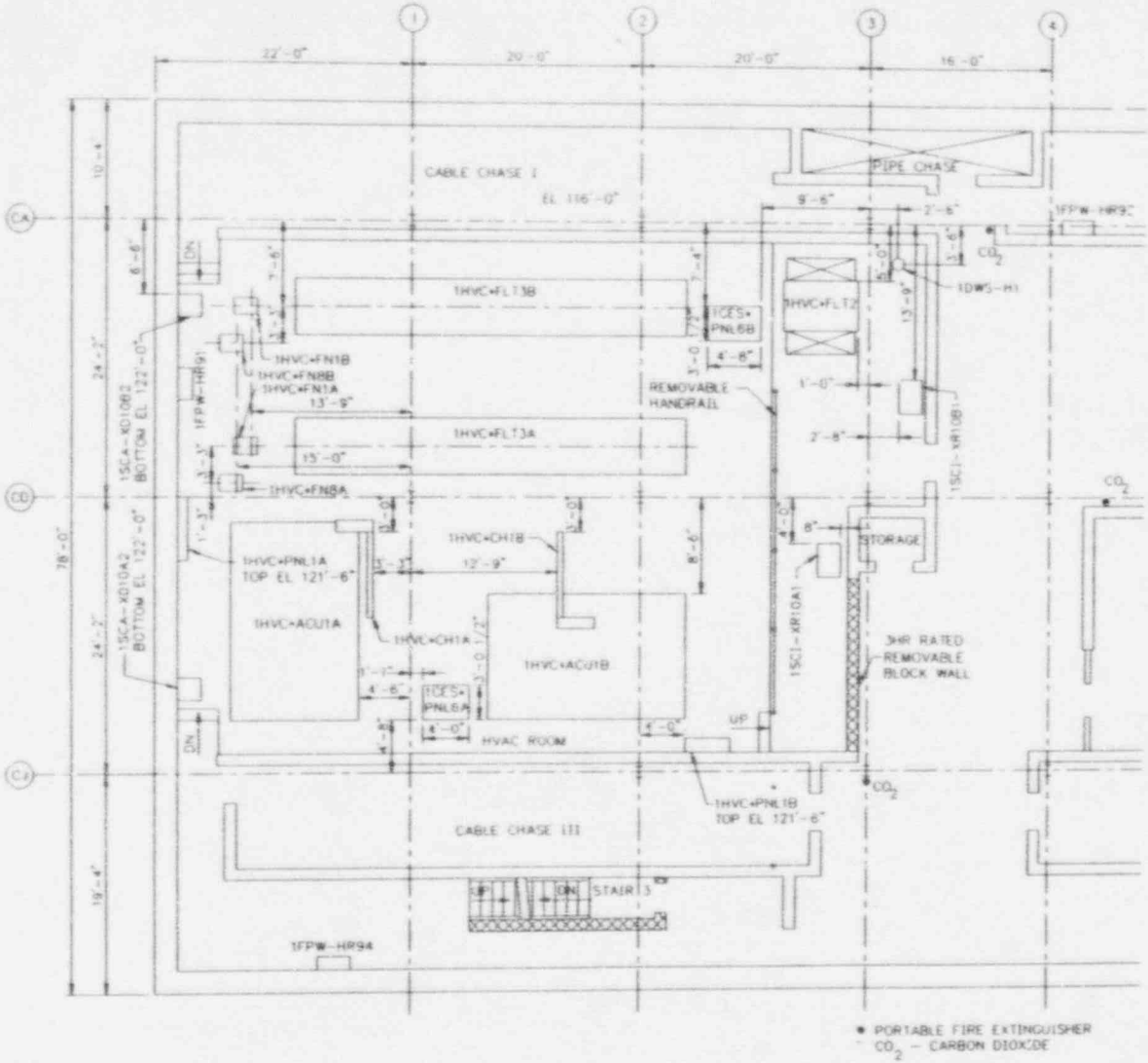
Current RBS Operating License, NPF-47.

USAR Chapter 9, Appendix 9A, "Fire Protection Program Evaluation Report (FPPER)."

USAR Chapter 9, Appendix 9B, "Fire Protection Program Comparison With Appendix R to 10CFR50."

USAR Chapter 15, Appendix 15A, "Plant Nuclear Safety Operational Analysis (NSOA)".

RBS Calculation G13.18.12.2-22.



* PORTABLE FIRE EXTINGUISHER
CO_2 – CARBON DIOXIDE

MARK NUMBER	NAME OF EQUIPMENT
1HVC*ACU1A	CONTROL ROOM AIR HANDLING UNIT
1HVC*ACU1B	CONTROL ROOM AIR HANDLING UNIT
1HVC*CH1A	CONTROL ROOM REHEAT COIL
1HVC*CH1B	CONTROL ROOM REHEAT COIL
1HVC*FLT2	CONTROL ROOM ROLL FILTER
1HVC*FLT3A	CONTROL ROOM CHARCOAL FILTER
1HVC*FLT3B	CONTROL ROOM CHARCOAL FILTER
1HVC*FN1A	FILTER TRAIN BOOSTER FAN
1HVC*FN1B	FILTER TRAIN BOOSTER FAN
1HVC*FN8A	FILTER TRAIN DECAY HEAT REMOVAL FAN
1HVC*FN8B	FILTER TRAIN DECAY HEAT REMOVAL FAN
1HVC*PNL1A	AIR HANDLING UNIT HEATER CONTROL PANEL
1HVC*PNL1B	AIR HANDLING UNIT HEATER CONTROL PANEL
1CES*PNL6A	RTD TRANSMITTER PANEL
1CES*PNL6B	RTD TRANSMITTER PANEL
1SCA-XD10A2	480 – 120 SINGLE PHASE TRANSFORMER
1SCA-XD10B2	480 – 120 SINGLE PHASE TRANSFORMER
1SCI-XR10A1	480 – 120 NORMAL REGULATING TRANSFORMER
1SCI-XR10B1	480 – 120 NORMAL REGULATING TRANSFORMER
1DWS-H1	ELECTRIC HOT WATER HEATER
1FPW-HR91	FIRE PROTECTION WATER STANDPIPE & HOSE REEL
1FPW-HR92	FIRE PROTECTION WATER STANDPIPE & HOSE REEL
1FPW-HR94	FIRE PROTECTION WATER STANDPIPE & HOSE REEL

Entergy Operations, Inc.
RIVER BEND STATION – UNIT 1
ENTERGY
ARRANGEMENT HVAC ROOM
FIRE AREA C-17 – CONTROL BLDG
SCALE 1/8"=1'-0"
JOB NUMBER
DRAWING NO
ATTACHMENT-1
SH 1
CON X
REV 0