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Georgia Power

*the southern electric system*

J. T. Beckham, Jr.  
Vice President and General Manager  
Nuclear Operations

NED-85-394  
1712N

May 9, 1985

Director of Nuclear Reactor Regulation  
Attention: Mr. John F. Stolz, Chief  
Operating Reactors Branch No. 4  
Division of Licensing  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

NRC DOCKET 50-366  
OPERATING LICENSE NPF-5  
EDWIN I. HATCH NUCLEAR PLANT UNIT 2  
REQUEST FOR TECHNICAL SPECIFICATION RELIEF

Gentlemen:

In accordance with the provisions of 10 CFR 50.90 as required by 10 CFR 50.59(c)(1), Georgia Power Company hereby proposes a change to the Technical Specifications, Appendix A to Operating License NPF-5. The proposed change, which is being requested on an emergency basis, would revise Specification 3.8.2.6, "Primary Containment Penetration Conductor Overcurrent Protective Devices".

We are requesting approval of either of two separate proposed revisions to the Specification. The preferred revision would remove all setpoints from the Table; the alternate revision would modify the setpoints for four specific breakers. Two additional changes are requested of an administrative nature which are common to either proposed revision. Although these changes would not affect unit operation, they are necessary to maintain the technical accuracy of the table. One change corrects a typographical error in the parts listing for a component. The other change revises motor control center frame identifications for two breakers for circuits which have been moved. If the constraints of schedule preclude consideration of the preferred more general revision (ie. removal of setpoints), we request that it be reviewed by the Commission subsequent to the resolution of this emergency relief request.

As noted above, we request the approval of either of these proposed revisions on an emergency basis in order to permit startup of the plant from the current refueling outage. The emergency nature of this request is due to the recent discovery, during scheduled surveillance testing, of four breakers which, in order for their associated circuits to function properly,

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must have their trip setpoints set at values higher than those specified in Technical Specification Table 3.8.2.6-1. The four breakers are associated with a) the Drywell Cooling Unit 2T47-C001B, b) the Drywell Cooling Return Air Fan 2T47-C001A, c) the Drywell Return Air Fan 2T47-C002B, and d) the Drywell Cooling Return Air Fan 2T47-C002A. A review has been conducted to assure that no other breakers listed in Table 3.8.2.6-1 require similar modification of their setpoints.

Technical Specification Table 3.8.2.6-1 lists trip setpoints (in amperes) for circuit breakers which provide overcurrent protection for electrical penetrations through the primary containment. The basis for setpoints specification is the protection of the electrical penetration from the effects of overcurrent. However, the values listed in the table correspond to the current at which damage to the connected load could occur. This amount of current is generally much lower than that at which damage to the penetration itself could occur. Technical Specification 3.8.2.6 requires that the associated equipment, in this specific case the drywell cooling fans, be de-energized if the trip setpoints listed in the table cannot be met. Such action would result in the loss of the unit due to the increased temperatures which would result.

Two of four affected penetrations are General Electric 100 Series Electric Penetration Assemblies using #8 size wire. Reviews of the specifications for this type penetration assembly indicate the following current versus time ratings for each circuit in the penetration:

- |  |  |
|--|--|
| 1. Steady state current                  | 50 amps  |
| 2. Startup current (30 seconds)          | 350 amps   |
| 3. Short circuit current (0.133 seconds) | 3300 amps RMS asymmetrical/<br>2350 amps symmetrical |

The other two affected penetrations are General Electric 100 Series Electric Penetration Assemblies using #6 size wire. Reviews of the specifications for this type penetration assembly indicate the following current versus time ratings for each circuit in the penetration:

- |  |  |
|--|--|
| 1. Steady state current                  | 70 amps  |
| 2. Startup current (30 seconds)          | 490 amps   |
| 3. Short circuit current (0.133 seconds) | 5200 amps RMS asymmetrical/<br>3850 amps symmetrical |

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The affected circuit breakers listed in Table 3.8.2.6-1 are Westinghouse Mark 75 HFB type molded-case magnetic-only (providing short circuit protection only) breakers. Reviews of manufacturer's specifications and characteristic trip curves for this breaker indicate an interrupt time of approximately 0.016 seconds (1 cycle), which is bounded by the 0.133 second short circuit current duration rating of the penetration as indicated above. These breakers are certified to NEMA standard AB1 (1969)-Paragraphs 2.16 and 2.22. Backup protection assuming single failures of these breakers, as required by Regulatory Guide 1.63 (October 1973), is provided by fuses located in the motor control centers.

As noted above, the trip setpoints presently listed in Technical Specification Table 3.8.2.6-1 are not based solely on protection of containment penetrations. The trip setpoints of the affected breakers are based on general guidelines designed to protect cables inside containment assuming a ground fault in the load. Industry recommendations for determination of setpoint vary. The Georgia Power Company procedure recommends that the setpoint be 200% of locked rotor current, if known, or otherwise be set at 12 times full load amps. Since the function of the motor is lost before the breaker opens, protection of the cables is an economic consideration rather than a safety consideration. Therefore, changes to the trip setpoints do not affect plant safety as long as they provide protection for the penetration by remaining within the current versus time limits and allow sufficient current to be supplied to the loads. Furthermore, properly selected molded case circuit breakers (considering such design parameters as load size, wire size, and penetration size) would not be adjustable outside the range which would protect the penetration against the effects of short circuits.

Of the two revisions to the Technical Specifications being proposed, we believe the more general change to be the best approach. In particular, the approach has the advantage of not requiring additional changes in the future to accommodate changes to equipment while maintaining the intended protection of the penetrations. The general approach consists of removing the setpoints from the Table and removing reference to the setpoints from the Surveillance Requirements, and substituting the applicable standard against which the breakers are tested (NEMA AB-2-1980) into the Surveillance Requirements. The NEMA standard which is presently in use requires thermal magnetic breakers be tested at 1275% of the continuous current rating followed by a test of 300% of the breaker rating. Magnetic only breakers are tested by use of a current at 141% of the trip setpoint. These tests demonstrate that the breakers are operable at their specified setpoint.

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This approach is based on the evaluation performed which concludes that protection of the penetration conductor is assured by any setting of the breaker which is installed under a controlled design review process. Breaker setting would, thus, become a procedural setting based on economic factors of motor or cable protection while continuing to provide, at any setting, protection with substantial margin for the penetration conductors. The proposed changes to the Technical Specifications for this general approach are contained in Attachment 1. If your review of the proposed change described above will require a review schedule beyond our projected startup date, we request your review and approval, on an emergency basis as noted above, of specific changes to the table necessary for startup. The proposed changes to the table to support this request are contained in Attachment 2.

The Plant Review Board has reviewed both proposed changes and determined that neither constitutes an unreviewed safety question. Accident probabilities and consequences are not increased above those analyzed in the FSAR. The function of the circuit breakers is not affected by a change in setpoints or removal of the setpoint from the specification. As detailed above, the circuit breaker's ability to provide the required electrical fault protection to the penetration is not adversely affected. No new accident types are created since no new modes of operation are involved. The effect on the margin of safety as defined in the bases for the Technical Specifications is not reduced, since the sizing of the breaker has by design provided protection for the penetration conductor.

The change to the four specific breaker ratings may marginally reduce the margins, because the setpoints are closer to the absolute limit of the penetration rating, but the new setpoints are clearly within the acceptable criteria of Regulatory Guide 1.63. Therefore, this change is consistent with item vi of the "Examples of Amendments that are Considered Not Likely to Involve Significant Hazards Considerations" listed on page 14,870 of the April 6, 1983, issue of the Federal Register. The general change which removes the setpoints from the Table also may reduce the margins, but for the same reasoning the change is acceptable. Therefore, this change is also consistent with item vi of the "Examples of Amendments that are Considered Not Likely to Involve Significant Hazards Considerations" listed on page 14,870 of the April 6, 1983, issue of the Federal Register. The change which alter the breaker location and correct the typographical error are purely administrative. Therefore, this change is consistent with item i of



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the "Examples of Amendments that are Considered Not Likely to Involve Significant Hazards Considerations" listed on page 14,870 of the April 6, 1983, issue of the Federal Register. Unit operation is not affected by these changes.

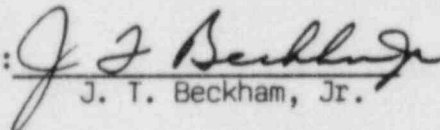
The unit is currently shutdown for refueling. The unit is expected to be ready to startup by May 12, 1985. We, therefore, request NRC review and approval of either change on an emergency basis commensurate with the above schedule.

Please contact this office for further discussion if necessary.

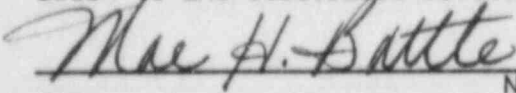
Pursuant to the requirements of 10 CFR 50.92, J. L. Ledbetter of the Georgia Department of Natural Resources will be sent a copy of this letter and all applicable attachments.

J. T. Beckham, Jr. states that he is Vice President of Georgia Power Company and is authorized to execute this oath on behalf of Georgia Power Company, and that to the best of his knowledge and belief the facts set forth in this letter are true.

GEORGIA POWER COMPANY

By:   
J. T. Beckham, Jr.

Sworn to and subscribed before me this 9th day of May, 1985.



Notary Public, Georgia, State at Large  
My Commission Expires Sept. 16, 1987  
Notary Public

MJB/mb

Enclosure

xc: H. C. Nix, Jr.  
Senior Resident Inspector  
J. N. Grace, (NRC-Region II)  
J. L. Ledbetter