

Georgia Power Co.  
200 Peachtree Street, N.W.  
Atlanta, Georgia 30333  
Telephone 404 522 2000

*From Kathleen J. Bowen*



Georgia Power  
Southern Electric System

J. T. Becknam, Jr.  
Vice President, Nuclear  
Development

March 28, 1995

Docket Nos. 50-321  
50-366

HL-4815

TAC Nos. M85557  
M85558

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

Edwin I. Hatch Nuclear Plant  
Response to Request for Additional Information:  
Regarding Generic Letter 92-08, Thermo-Lag Fire Barriers

Gentlemen:

By letter dated December 30, 1994, the Nuclear Regulatory Commission (NRC) staff requested Georgia Power Company (GPC) to provide the following information related to the Thermo-Lag Fire Barriers currently installed:

1. The tests and analyses required to verify that the material properties of the Thermo-Lag fire barrier materials are representative of materials used to address industry technical issues and to construct ampacity derating test specimens.
2. The methodology to determine the sample size for tests and analysis.
3. The schedule for verifying the material properties.
4. After the requested tests and analyses from the NRC have been obtained and verified, the NRC requests that a written supplemental report be provided.

GPC is currently implementing a program to remove the reliance on Thermo-Lag as a fire barrier material. This program was described in GPC's letter dated December 13, 1994. At that time, the possibility existed that certain plant specific conditions would potentially preclude deleting the fire barrier requirement and a limited number of exemptions were possible. However, sufficient evaluations have been completed and this possibility is no longer of concern. Consequently, GPC does not intend to request exemptions related to fire endurance tests on the Thermo-Lag barriers.

GPC also stated that, in general, the Thermo-Lag material may be abandoned and not physically removed from the plant. However, given the outstanding technical issues associated with combustibility and ampacity derating, the program to resolve the Thermo-Lag issue has been revised to include removal of the Thermo-Lag material. As a result, the combustibility and derating issues will also be resolved by removing the material. An evaluation of the cable will be conducted to determine if any aging concerns exists. Resolution of the Thermo-Lag issue,

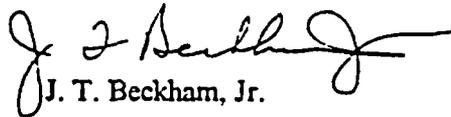
U.S. Nuclear Regulatory Commission  
March 28, 1995

Page Two

including the removal of the Thermo-Lag material, will be completed for both Unit 1 and Unit 2 by startup of Unit 2 from the Fall 1998 refueling outage. The enclosure provides GPC's response to the requested information.

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

Sincerely,

  
J. T. Beckham, Jr.

Sworn to and subscribed before me this 28<sup>th</sup> day of March, 1995.

  
Notary Public

My Commission Expires: November 3, 1997

JKB/eb

Enclosure: Response to Request for Additional Information  
Regarding Generic Letter 92-08, Thermo-Lag Fire Barriers

cc: Georgia Power Company

Mr. H. L. Sumner, Nuclear Plant General Manager  
NORMS

U.S. Nuclear Regulatory Commission, Washington, D.C.

Mr. K. Jabbour, Licensing Project Manager - Hatch

Mr. C. Grimes, Technical Specifications Branch

U.S. Nuclear Regulatory Commission, Region II

Mr. S. D. Ebnetter, Regional Administrator

Mr. B. L. Holbrook, Senior Resident Inspector - Hatch

## Enclosure

### Edwin I. Hatch Nuclear Plant Response to Request for Additional Information Regarding Generic Letter 92-08 Thermo-Lag Fire Barriers

#### 1. Thermo-Lag Materials

##### 1.a. NRC Requested Information

Describe the specific tests and analyses that will be performed to verify the Thermo-Lag fire barrier materials that are currently installed at Hatch, or that will be installed in the future, are representative of the materials that were used to address the technical issues associated with Thermo-Lag barriers and to construct the fire endurance and ampacity derating test specimens. The tests and analyses shall address the material properties and attributes that were determined or controlled by TSI during the manufacturing process and the quality assurance program. The tests and analyses shall also address the material properties and attributes that contribute to conclusions that the Thermo-Lag materials and barriers conform to NRC regulations. These include:

- (1) chemical composition
- (2) material thickness
- (3) material weight and density
- (4) the presence of voids, cracks, and delaminations
- (5) fire endurance capabilities
- (6) combustibility
- (7) flame spread rating
- (8) ampacity derating
- (9) mechanical properties such as tensile strength, compressive strength, shear strength, and flexural strength.

##### GPC Response

GPC is currently implementing a program to eliminate reliance on Thermo-Lag as a fire barrier material. Sufficient evaluations and studies have been completed to show that it is possible to completely eliminate this reliance. Given the outstanding technical issues associated with combustibility and ampacity derating, the program to resolve the Thermo-Lag issue has been revised to include removal of the Thermo-Lag material. Consequently, the combustibility and ampacity derating issues will be resolved by removing the material. The only technical issue remaining will concern the potential age-related degradation during the time the material was installed. GPC will resolve the aging concern by taking limited samples of the installed barrier material and testing the material to determine heat transfer performance. GPC may also take samples from cables

Enclosure  
Response to Request for Additional Information  
Regarding Generic Letter 92-08  
Thermo-Lag Fire Barriers

previously enclosed with the Thermo-Lag material and test the cables to determine aging degradation. A combination of the two methods may also be used.

1.b. NRC Requested Information

Describe the methodology that will be used to determine the sample size and demonstrate that the sample size will be large enough to ensure that the information and data obtained will be sufficient to assess the total population of in-plant Thermo-Lag barriers and the materials that will be installed in the future. In determining the sample size, consider the time of installation and manufacture of the various implant materials and barrier installations. Give the number and types (e.g., panels, conduit preshapes, trowel-grade material, stress skin) of samples that will be tested or analyzed.

GPC Response

GPC's program to resolve the Thermo-Lag issue has been revised to include removal of the material. Consequently, sampling to confirm that the installed material is representative of materials used in the industry test program is not necessary.

1.c. RC Requested Information

Submit the schedule for verifying the Thermo-Lag materials.

GPC Response

As described previously, GPC's program to resolve the Thermo-Lag issue will not require tests to verify the Thermo-Lag materials. As previously stated the material will be removed from the plant prior to startup from the Fall 1998 Unit 2 outage.

1.d. NRC Requested Information

After the analyses and tests have been completed, submit a written supplemental report that confirms that this effort has been completed and provide the results of the tests and analyses. Describe any changes to previously submitted plans or schedules that result from the tests or analyses.

Enclosure  
Response to Request for Additional Information  
Regarding Generic Letter 92-08  
Thermo-Lag Fire Barriers

GPC Response

As described previously, no analyses and test will be necessary or conducted, except for the potential degradation due to aging. The analyses and testing for aging will be complete prior to startup from the Fall 1998 Unit 2 refueling outage.

**2. Important Barrier Parameters**

**2.a. NRC Requested Information**

Describe the examinations and inspections that will be performed to obtain the important barrier parameters given in Section II of the RAI of December 1993 for the Thermo-Lag fire barrier configurations installed at Hatch.

GPC Response

GPC is currently implementing a program to remove reliance on Thermo-Lag as a fire barrier material. This program has now been revised to include removal of the Thermo-Lag material. The important barrier parameters given in Section II of the NRC's request for additional information dated December 21, 1993, concern the need to evaluate installed barrier configurations to specimens used in the industry cable tray fire tests. These parameters include items such as cable size, cable jacket type, conductor insulation, cable fill and other items listed in Section II. GPC has completed sufficient evaluations to conclude that exemptions related to fire endurance tests on the Thermo-Lag material will not be requested. Also, given the remaining technical issues associated with combustibility and ampacity derating, the Thermo-Lag material will be removed from the plant. Consequently, no further examinations or inspections are necessary as applicability to the fire test specimens will not be required.

**2.b. NRC Requested Information**

Describe the methodology that will be applied to determine the number and type of representative in-plant fire barrier configurations that will be examined in detail and demonstrate that the sample size is adequate to ensure that the information and data that will be obtained are adequate to assess the total population of in-plant Thermo-Lag barriers. A large enough sample of the total population of configurations should be examined to provide reasonable assurance that the materials and important barrier parameters used to construct the in-plant barriers and any future barrier installations or modifications, are

Enclosure  
Response to Request for Additional Information  
Regarding Generic Letter 92-08  
Thermo-Lag Fire Barriers

representative of the parameters used to construct the fire endurance test specimens.

GPC Response

As described in the response to item 2.a, GPC's program will eliminate the reliance on Thermo-Lag as a fire barrier material and physically remove the material from the plant. Consequently, examinations are not necessary to assure that the important in-plant parameters are representative of the fire endurance test specimens.

2.c. NRC Requested Information

Submit the schedule for obtaining and verifying all of the important barrier parameters.

GPC Response

GPC's program for eliminating reliance on Thermo-Lag as a fire barrier and removing the material from the Plant does not require verification of important barrier parameters. No examinations in this regard will be performed.

2.d. NRC Requested Information

After the information has been obtained and verified, submit a written supplemental report that confirms that this effort has been completed and provides the results of the examinations and inspections. Verify that the parameters of the in-plant configurations are representative of the parameters of the fire endurance test specimens. Describe any changes to previously submitted plans or schedules that result from the examinations.

GPC Response

As described above, no examinations and inspections to verify important barrier parameters will be performed and a written supplemental report is not applicable.