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April 16, 1993

Docket Nos. 50-321  
50-366

HL-3250  
005191

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

Edwin I. Hatch Nuclear Plant  
Response to Generic Letter 92-08

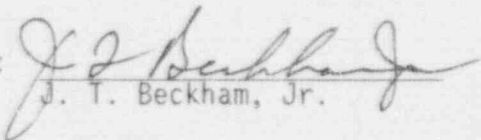
Gentlemen:

On December 17, 1992, the NRC issued Generic Letter (GL) 92-08, "Thermo-Lag 330-1 Fire Barriers." In this letter, the NRC expressed concern with the fire endurance capability of Thermo-Lag 330-1 fire barriers and the ampacity derating of cables enclosed in these barriers. The GL requires each licensee to submit a written report addressing specific items concerning the use of Thermo-Lag 330-1 barriers at their facility and the qualification of the barriers for fire endurance and ampacity derating. This report must also specify any corrective actions which have been or will be taken and a schedule for implementing such actions.

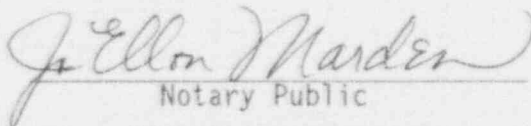
The enclosure to this letter lists each item as it appears in the GL and provides the Plant Hatch response.

Mr. J. T. Beckham, Jr. states he is duly 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.

Georgia Power Company

By:   
J. T. Beckham, Jr.

Sworn to and subscribed to me this 16<sup>th</sup> day of April 1993.

  
Notary Public

MY COMMISSION EXPIRES JUNE 30, 1996  
MCM/cr

Enclosure: (See next page.)

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Enclosure:

cc: Georgia Power Company  
Mr. H. L. Sumner, General Manager - Nuclear Plant  
NORMS

U.S. Nuclear Regulatory Commission, Washington, D.C.  
Mr. K. Jabbour, Licensing Project Manager - Hatch

U.S. Nuclear Regulatory Commission, Region II  
Mr. S. D. Ebnetter, Regional Administrator  
Mr. L. D. Wert, Senior Resident Inspector - Hatch

Enclosure

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Generic Letter (GL) 92-08 lists several specific items concerning Thermo-Lag 330-1 fire barrier material which require a written response. Each item is transcribed individually followed by the response for Plant Hatch.

GL 92-08, Item 1:

State whether Thermo-Lag 330-1 barriers are relied upon (a) to meet 10 CFR 50.48, to achieve physical independence of electrical systems, (b) to meet a condition of a plant's operating license, or (c) to satisfy a licensing commitment. If applicable, state that Thermo-Lag 330-1 is not used at the facility. This generic letter applies to all 1-hour and all 3-hour Thermo-Lag 330-1 materials and barrier systems assembled by any assembly method such as assembling pre-formed panels and conduit shapes, as well as spray, trowel and brush-on applications.

Response to Item 1:

By letter dated July 20, 1992, Georgia Power Company (GPC) provided the required response to NRC Bulletin No. 92-01, "Failure of Thermo-Lag 330 Fire Barrier System to Maintain Cabling in Wide Cable Trays and Small Conduits Free from Fire Damage." In this response, GPC specified for Plant Hatch the areas of the plant which have Thermo-Lag 330 fire barrier material installed on small diameter conduit or wide cable trays which provide safe shutdown capability.

By letter dated September 25, 1992, GPC provided the required response to NRC Bulletin No. 92-01, Supplement 1, "Failure of Thermo-Lag 330 Fire Barrier System to Perform Its Specified Fire Endurance Function." In this response, GPC specified for Plant Hatch the areas of the plant which have pre-formed Thermo-Lag 330 panels and conduit shapes installed to provide safe shutdown capability which did not meet the criteria specified in the original bulletin.

GL 92-08 expands the scope of NRC Bulletin No. 92-01 and its supplement in two ways.

- 1) The bulletin and supplement are concerned only with Thermo-Lag used to provide safe shutdown capability. The GL covers the use of Thermo-Lag to satisfy any license condition or commitment.
- 2) The bulletin and supplement are concerned only with pre-formed Thermo-Lag panels and conduit shapes. The GL covers all Thermo-Lag assembly methods and configurations.

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The use of Thermo-Lag 330-1 at Plant Hatch is limited to protecting circuits which provide safe shutdown capability per 10 CFR 50 Appendix R, and 10 CFR 50.48. Thermo-Lag barriers are not used to meet a specific condition of the plant's operating license. There are no specific licensing commitments pertaining to Thermo-Lag 330-1. Thermo-Lag 330-1 assembly methods and configurations other than pre-formed panels and conduit shapes are used at Plant Hatch. However, all Thermo-Lag 330-1 fire barrier material installed in Plant Hatch is contained in the areas listed in the above referenced bulletin responses.

GL 92-08, Item 2:

If Thermo-Lag 330-1 barriers are used at the facility,

- (a) State whether or not the licensee has qualified the Thermo-Lag 330-1 fire barriers by conducting fire endurance tests in accordance with the NRC's requirements and guidance or licensing commitments.
- (b) State (1) whether or not the fire barrier configurations installed in the plant represent the materials, workmanship, methods of assembly, dimensions, and configurations of the qualification test assembly configurations; and (2) whether or not the licensee has evaluated any deviations from the tested configurations.
- (c) State (1) whether or not the as-built Thermo-Lag 330-1 barrier configurations are consistent with the barrier configurations used during the ampacity derating tests relied upon by the licensee for the ampacity derating factors used for all raceways protected by Thermo-Lag 330-1 (for fire protection of safe shutdown capability or to achieve physical independence of electrical systems) and (2) whether or not the ampacity derating test results relied upon by the licensee are correct and applicable to the plant design.

Response to Item 2:

- (a) GPC did not conduct independent fire endurance tests on Thermo-Lag fire barriers. The Thermo-Lag 330-1 fire barriers installed at Plant Hatch were qualified by the vendor based on NRC guidance in existence at the time of the qualification. The Architect Engineer (AE) for Plant Hatch reviewed and approved the Thermo-Lag qualification documentation prior to installation of the Thermo-Lag barriers.

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- (b) At the time of installation, GPC made every effort to construct Thermo-Lag 330-1 fire barriers such that they matched tested configurations to the extent possible. However, due to the myriad of necessary configurations which were encountered, some deviations exist. Installed configurations which deviated from tested configurations were evaluated by the AE at the time of installation.
- (c) At the time of installation, GPC constructed Thermo-Lag 330-1 fire barriers in configurations which matched tested configurations to the extent possible. However, due to the variety of actual plant configurations which were encountered, some deviations were necessary. Installed configurations which deviated from tested configurations were evaluated by the AE at the time of installation.

Since that time, various derating factors have been reported for similar configurations. Near term testing will be performed under the NUMARC program based on a methodology which will be concurred with by the industry and the NRC. NUMARC has discussed with the NRC the use of IEEE P848 Draft 11 as an appropriate method to determine ampacity derating factors for generic raceway configurations, and is currently working with the NRC to address identified technical questions. Once available, GPC intends to use the generic ampacity derating factors developed by NUMARC in place of existing information.

For many installed configurations, upgrades may be developed through the industry Thermo-Lag program to meet fire endurance requirements. These upgrades may involve application of additional fire barrier material to installed configurations, and as such may require further ampacity derating tests or analytical methods to extrapolate the results of baseline ampacity testing. The industry program is expected to include development of such information. For this reason, GPC actions to re-assess ampacity derating of installed configurations at this time would be of limited benefit.

GL 92-08 Item 3:

With respect to any answer to items 2(a), 2(b), or 2(c) above in the negative, (a) describe all corrective actions needed and include a schedule by which such actions shall be completed and (b) describe all compensatory measures taken in accordance with the technical specifications or administrative controls. When corrective actions have been completed, confirm in writing their completion.

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Response to Item 3:

Although barriers were evaluated and qualified consistent with existing guidance at the time, further actions are now necessary to address fire endurance and ampacity derating of Thermo-Lag barriers. GPC plans to participate in the industry Thermo-Lag program sponsored by NUMARC which is intended to provide generic testing and information necessary to resolve both the fire endurance and ampacity derating issues.

The program activities concerning fire endurance of Thermo-Lag 330-1 fire barriers are aimed at identifying configurations which will meet the requirements for a one or three hour rated fire barrier, and upgrading existing barriers to conform to these configurations. In some cases, other options may be available and preferable based on cost. In addition, the resolution of the ampacity derating issue may impact decisions made to resolve the fire endurance issue. Considerations such as fire loading and raceway location may obviate the need for a given barrier to be able to withstand a fire for the required time period. In these cases, exemptions to the regulations may be pursued. In other cases it may be cost effective to reroute cables, modify circuits or replace the Thermo-Lag with another type of fire barrier in order to meet the applicable regulatory requirements. These determinations will be made on a case by case basis once the information from the NUMARC testing program has been received.

Since GPC's decisions for resolution of this issue depend on activities which will be occurring on an industry-wide basis through NUMARC, it is not practical for GPC to attempt to provide specific dates for which activities applicable to Plant Hatch will be complete. It is expected NUMARC will provide the NRC with schedules and schedule updates as such information becomes available. Compensatory measures described in GPC's responses to NRC Bulletin No. 92-01 and its Supplement 1 will remain in effect until all issues relating to the qualification of Thermo-Lag 330-1 fire barriers have been resolved. When all actions necessary to resolve this issue are complete, GPC will confirm in writing their completion, and only then will the current compensatory measures be terminated.

GL 92-08, Item 4:

List all Thermo-Lag 330-1 barriers for which answers to item 2 cannot be provided in the response due within 120 days from the date of this generic letter, and include a schedule by which such answers shall be provided.

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Response to Item 4:

The information provided in response to item 2 above applies to all Thermo-Lag 330-1 fire barriers installed in Plant Hatch. As stated above in response to item 3, it is not practical at this time for GPC to attempt to provide a schedule for future activities.