

February 26, 1997

Mr. Joseph J. Hagan
Vice President, Operations GGNS
Entergy Operations, Inc.
P. O. Box 756
Port Gibson, MS 39150

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION RELATED TO THERMO-LAG FIRE
BARRIERS, GENERIC LETTER 92-08, GRAND GULF NUCLEAR STATION
(TAC NO. M85554)

Dear Mr. Hagan:

The staff is currently reviewing your submittal dated December 20, 1996, which was submitted as part of your responses to Generic Letter 92-08 on Thermo-Lag fire barriers. To permit us to continue our review on our current schedule, we request that the additional information requested in the enclosure be provided within 30 days of your receipt of this letter. This request for additional information was discussed in a telephone conference call with your staff on February 20, 1997.

Sincerely,

Jack N. Donohew

2/26/97

Jack N. Donohew, Senior Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

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Docket No. 50-416

Enclosure: Request for Additional Information

cc w/encl: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

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Vice President, Operations GGNS
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Sincerely,

A handwritten signature in dark ink, appearing to read "Jack N. Donohew", written in a cursive style.

Jack N. Donohew, Senior Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket No. 50-416

Enclosure: Request for Additional Information

cc w/encl: See next page

Mr. Joseph J. Hagan
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Grand Gulf Nuclear Station

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REQUEST FOR ADDITIONAL INFORMATION
RELATED TO GENERIC LETTER 92-08, THERMO-LAG FIRE BARRIERS

ENTERGY OPERATIONS, INC.

GRAND GULF NUCLEAR STATION, UNIT 1

DOCKET NO. 50-416

In reviewing the licensee's submittal dated December 20, 1996, as part of the licensee's responses to Generic Letter 92-08, the staff has the following questions for clarification of the Attachment 1 to that letter:

1. In the first part of the licensee's response to Question 1 (attached to the submittal of December 20, 1996) regarding Multiple Conduits in a Common Enclosure, it is not clear whether the grouping factors given in Table IX of ICEA Standard E-46-426 are part of the design calculations for plant electrical raceways independent of the derating factor for the Thermo-Lag fire barrier installations and simply omitted from the subject calculations or are the subject grouping factors being commingled into the overall derating factor for the Thermo-Lag installations. If the latter case is true, clarify which factor applies for the Thermo-Lag contribution versus the grouping derating factors when the spacing between the conduit surfaces is not greater than the conduit diameter or less than 1/4 of the conduit diameter. Also, discuss the applicability of industry standard grouping factors in the subject calculations which were submitted in the licensee's letter of June 28, 1996.

In the second part of the licensee's response to Question 1 regarding Individually Enclosed Conduits, it is not clear whether a conduit grouping factor will be applied to all applicable cables and applicable design calculations will be revised to reflect these derating factors. Clarify the licensee's commitment in its submittal dated December 20, 1996.

2. In the licensee's response to Question 2, the licensee stated the following: "Continuously energized constant KVA loads powered by cables within the scope of this evaluation are sized to drive no more than 100% of their horsepower. Therefore, overloading of cables connected to constant KVA loads, due to continuous operation at 115% of rated horsepower, does not require additional ampacity derating consideration."

The staff believes that ampacity margin determinations should be based on worst case continuous ampere loading, instead of using equipment nameplate data which may not reflect actual field conditions. This question is not intended to address ampacity derating due to transient voltage conditions. The staff's concern pertains to the potential understatement of final ampacity margins (i.e., after derating for Thermo-Lag and other typical design factors (e.g., cable fill,

ENCLOSURE

temperature) based on the use of non-conservative ampere loading values (i.e., using equipment nameplate data when the load is operated above its full load ampere rating). The licensee is requested to clarify its December 20, 1996, response in terms of the above stated concern.

The worst-case non-transient condition is having the voltage at the load terminals at 90% of rated voltage because the current will then be at its highest for the load. This condition is not a concern to the staff if the licensee can verify that the voltage at the load terminals will never be below 100% of rated voltage. The staff requests if the licensee can verify that this is true for the unit.

3. In the licensee's response to Question 6, a technical rationale was presented by the licensee to explain how the installed configurations are bounded by referenced ampacity derating tests. The staff requests that the applicable engineering reports be revised to reflect the use of the Thermo-Lag Flexi-Blanket 330-660 fire barrier material and the associated technical justification for the its ampacity derating factor.