

June 15, 2007

Mr. William R. Brian
Vice President of Operations
Grand Gulf Nuclear Station
Entergy Operations, Inc.
P.O. Box 756
Port Gibson, MS 39150

SUBJECT: GRAND GULF NUCLEAR STATION, UNIT 1 - COMMITMENT FOR
HYDROGEN IGNITER BACKUP POWER SUPPLY AND CLOSURE PROCESS
FOR GENERIC ISSUE 189, "SUSCEPTIBILITY OF ICE CONDENSER AND
MARK III CONTAINMENTS TO EARLY FAILURE FROM HYDROGEN
COMBUSTION DURING A SEVERE ACCIDENT" (TAC NO. MB7245)

Dear Mr. Brian:

This letter acknowledges your March 1, 2007, letter committing to changes at the Grand Gulf Nuclear Station that will enhance plant capabilities to mitigate the potential for early containment failure from hydrogen combustion. In addition to existing procedures to power one train of igniters through a cross-tie from the Division 3 diesel generator, you proposed changes involving procurement of portable equipment to power one train of igniters and development of associated procedures and training.

The Nuclear Regulatory Commission (NRC) staff agrees that the proposed changes will resolve concerns related to Generic Issue 189 (GI-189), "Susceptibility of Ice Condenser and Mark III Containments to Early Failure from Hydrogen Combustion During a Severe Accident," and provide benefits for certain security scenarios. The NRC staff understands that the changes will enhance the electrical independence of the containment hydrogen igniter system. This action is warranted for boiling water reactors with Mark III containments because many systems that prevent core damage rely on the same power supplies and electrical distribution system as the hydrogen igniters. This enhancement mitigates the potential for early containment failure by allowing control of hydrogen within containment following certain beyond-design-basis events that may progress to core damage and preclude operation of the hydrogen igniters from their normal power supply. The NRC staff expects this enhancement will provide hydrogen igniter system electrical independence commensurate with the expected frequency, challenges, and uncertainties associated with these beyond-design-basis events.

Consistent with the guidelines of NRC Management Directive 6.4, "Generic Issues Program," the NRC staff will perform a verification inspection at Grand Gulf. These inspections will include elements to verify that you establish procedures to provide back-up power to the hydrogen igniters, train appropriate staff in the procedures, and institute appropriate controls on the reliability and availability of necessary equipment. Procedures that allow trained personnel to establish backup power to the igniters within 3 hours are fully consistent with goals to mitigate potential hydrogen accumulation. The NRC staff understands that implementation of vendor recommended maintenance and existing procedures will ensure adequate availability and

reliability of the backup power supplies. In addition, NRC licensing project managers may verify the integrity of your commitments over time through established review procedures for your commitment management program.

Verification of your committed actions and those of other affected licensees will provide the basis by which the NRC will close out GI-189. The NRC staff will perform the verification inspection at a time consistent with the implementation date specified in your letter. Accordingly, please keep the NRC staff informed of any changes in the scope of modifications or the implementation date.

Sincerely,

/RA by John Lubinski for Catherine Haney

Catherine Haney, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No.: 50-416

License No.: NPF-29

cc: See next page

W. R. Brian

-2-

reliability of the backup power supplies. In addition, NRC licensing project managers may verify the integrity of your commitments over time through established review procedures for your commitment management program.

Verification of your committed actions and those of other affected licensees will provide the basis by which the NRC will close out GI-189. The NRC staff will perform the verification inspection at a time consistent with the implementation date specified in your letter. Accordingly, please keep the NRC staff informed of any changes in the scope of modifications or the implementation date.

Sincerely,

/RA by John Lubinski for Catherine Haney

Catherine Haney, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No.: 50-416

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November 2006