

**Entergy
Operations**

Entergy Operations, Inc.

P.O. Box 756

Port Gibson, MS 39150

Tel 601-437-6408

W. T. Cottle

Vice President

Operations

Grand Gulf Nuclear Station

August 20, 1990

U.S. Nuclear Regulatory Commission
Mail Station P1-137
Washington, D.C. 20555

Attention: Document Control Desk

Gentlemen:

SUBJECT: Grand Gulf Nuclear Station
Unit 1
Docket No. 50-416
License No. NPF-29
Supplemental Information
for PCOL-90/03 Revision 2
AECM-90/0154

Entergy Operations, Inc. - Grand Gulf Nuclear Station (GGNS) submitted by letter AECM-90/0135 dated August 6, 1990 a revision to the proposed amendment to the GGNS Operating License (OL) previously submitted April 27, 1990 (AECM-90/0056) and July 5, 1990 (AECM-90/0111). The proposed amendment requested changes to the GGNS Technical Specifications (TS) due to the addition of the Alternate Decay Heat Removal System (ADHRS). In addition, TS changes were proposed to address the Staff concern regarding manual realignment of low pressure coolant injection emergency core cooling subsystems during plant shutdown. The Staff concern was identified in the Safety Evaluations for OL Amendments 58 and 59 dated March 16, 1989 and March 27, 1989, respectively.

On August 15, 1990 the Staff communicated to Entergy Operations - GGNS two comments generated by their review of the August 6, 1990 submittal. Attachments 2 and 3 of this letter provides the Entergy Operations - GGNS responses.

In accordance with the provisions of 10CFR50.4, the signed original of the supplemental information is enclosed. This supplemental information has been reviewed and accepted by the Plant Safety Review Committee. The Safety Review Committee reviewed and approved the original application.

Based on the guidelines presented in 10CFR50.92, Entergy Operations - GGNS has concluded, as documented in AECM-90/0135, that the proposed amendment involves no significant hazards considerations. The attached supplemental information does not affect this conclusion since the proposed change to TS 3/4.5.2 is more restrictive than that previously submitted in AECM-90/0135 for TS 3/4.5.2.

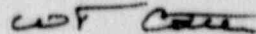
9008280168 900820
PDR AD00K 05000416
P CDC

AEC90816/SNLICFLR

Acc

The use of ADHRS is required in order to support the upcoming fourth refueling outage (RF04) at GGNS. As now scheduled, RF04 is to begin approximately October 1, 1990. In order to support the current outage schedule, Entergy Operations - GGNS requests that the NRC complete its review of the proposed TS amendment by no later than September 24, 1990 to allow sufficient time for implementation of the TS amendment prior to RF04.

Yours truly,



WTC:be

Attachments: 1. Affirmation per 10CFR50.390
2. Responses to NRC Staff Comments on AECM-90/0135
3. Proposed TS 3/4.5.2

cc: Mr. D. C. Hintz (w/a)
Mr. T. H. Cloninger (w/a)
Mr. R. B. McGehee (w/a)
Mr. N. S. Reynolds (w/a)
Mr. H. L. Thomas (w/o)
Mr. H. O. Christensen (w/a)

Mr. Stewart D. Ebnetter (w/a)
Regional Administrator
U.S. Nuclear Regulatory Commission
Region II
101 Marietta St., N.W., Suite 2900
Atlanta, Georgia 30323

Mr. L. L. Kintner, Project Manager (w/a)
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Mail Stop 11D21
Washington, D.C. 20555

BEFORE THE
UNITED STATES NUCLEAR REGULATORY COMMISSION

LICENSE NO. NPF-29

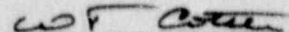
DOCKET NO. 50-416

IN THE MATTER OF

MISSISSIPPI POWER & LIGHT COMPANY
and
SYSTEM ENERGY RESOURCES, INC.
and
SOUTH MISSISSIPPI ELECTRIC POWER ASSOCIATION
and
ENTERGY OPERATIONS, INC.

AFFIRMATION

I, W. T. Cottle, being duly sworn, state that I am Vice President, Operations GGNS of Entergy Operations, Inc.; that on behalf of Entergy Operations, Inc., System Energy Resources, Inc., and South Mississippi Electric Power Association I am authorized by Entergy Operations, Inc. to sign and file with the Nuclear Regulatory Commission, this application for amendment of the Operating License of the Grand Gulf Nuclear Station; that I signed this application as Vice President, Operations GGNS of Entergy Operations, Inc. and that the statements made and the matters set forth therein are true and correct to the best of my knowledge, information and belief.



W. T. Cottle

STATE OF MISSISSIPPI
COUNTY OF HINDS

SUBSCRIBED AND SWORN TO before me, a Notary Public, in and for the County and State above named, this 20th day of August, 1990.

(SEAL)



Notary Public

My commission expires:

My Commission Expires June 13, 1993

DKYT5401.50/JNSFLR

Responses to NRC Staff Comments on AECM-90/0135

On August 15, 1990 the NRC Staff provided comments to Entergy Operations - GGNS concerning letter AECM-90/0135 dated August 6, 1990. The following are the Entergy Operations - GGNS responses to the Staffs' August 15, 1990 comments.

Staff Comment No. 1

The Alternate Decay Heat Removal System (ADHRS) is designed to be capable of removing reactor decay heat one day after shutdown. What is the average reactor coolant temperature that ADHRS can maintain one day after shutdown?

Entergy Operations - GGNS Response No. 1

The ADHRS has been designed to provide adequate decay heat removal to maintain an average reactor coolant temperature of 200°F one day after shutdown. The average reactor coolant temperature which can be maintained by the ADHRS one day after shutdown has been calculated for various conditions. Under conservative design conditions, with a 24 hours post shutdown decay heat load (7% MBtu/hr), a Plant Service Water system (PSW) temperature of 75°F, and conservative ADHRS heat exchanger tube fouling factors, an average reactor coolant temperature of 200°F can be maintained with ADHRS flow at 3600 gpm and PSW flow at 3000 gpm. A more realistic operating case has also been considered for an expected decay heat load of 64 MBtu/hr and a PSW temperature of 70°F. Under the realistic conditions, an average reactor coolant temperature of 175°F can be maintained with ADHRS flow at 3200 gpm and PSW flow at 3000 gpm.

Using the same conservative design conditions as above (except for decay heat load), the average reactor coolant temperature can be maintained at 140°F seven days after shutdown (assuming a decay heat load of 40 MBtu/hr). A more realistic evaluation based on the same realistic conditions previously listed above shows that the average reactor coolant temperature can be maintained at 140°F four days after shutdown (assuming a decay heat load of 40 MBtu/hr).

STAFF COMMENT NO. 2

The proposed changes to TS 3/4.5.2 should include the requirement that one of the two required ECCS subsystems/systems shall have an operable associated diesel generator.

Entergy Operations - GGNS Response No. 2

The proposed changes to TS 3/4.5.2 now include the requirement requested by the NRC Staff. Attachment 3 of this submittal contains the proposed changes.