



ENTERGY

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October 7, 1996

M. J. Meisner

Director

Nuclear Safety & Regulatory Affairs

U.S. Nuclear Regulatory Commission  
Mail Station P1-37  
Washington, D.C. 20555

Attention: Document Control Desk

Subject: Grand Gulf Nuclear Station  
Docket No. 50-416  
License No. NPF-29  
Additional Response to NRC Bulletin 95-02

Reference: Response to NRC Bulletin 95-02, Dated November 17, 1995,  
GNRO-95/00124

GNRO-96/00080

Gentlemen:

NRC Bulletin 95-02, "Unexpected Clogging of a Residual Heat Removal (RHR) Pump Strainer While Operating in Suppression Pool Cooling Mode" was issued for licensee response while Grand Gulf Nuclear Station (GGNS) was in the process of developing a new Foreign Material Exclusion (FME) procedure. Also, GGNS identified a light amount of debris on the RHR A and B suppression pool strainers while performing the inspections requested of the Bulletin. Therefore, the referenced GGNS response to two Requested Actions of this Bulletin regarding FME revealed that "Grand Gulf is currently in the process of re-evaluating its present Foreign Material Exclusion program, and will provide a written response with details of any program deficiencies and proposed enhancements." Attachment 1 of this submittal provides the follow-up response.

Recently, GGNS experienced a plant transient similar in nature to the event described in NRC Bulletin 95-02, with both trains of RHR operated concurrently in the suppression pool cooling mode following pool agitation due to SRV lifts. Subsequent inspection of the ECCS suppression pool strainers indicated that the strainers were as clean as previous inspections, and had experienced no fouling as a result of this event.

This information is being submitted under oath and affirmation in accordance with 10CFR50.54(f). Please contact Rick Ingram at (601) 437-2238 should you have any questions or require additional information regarding this matter.

Yours truly,

ERH/SEM/mtc

attachments: 1. Additional Response to NRC Bulletin 95-02  
2. Affirmation

cc: (See Next Page)

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Attachment 1

Additional Response to NRC Bulletin 95-02

NRC Bulletin 95-02 contains five Requested Actions. The initial GGNS submittal provided a complete response to Requested Actions 2), 3) and 5). The GGNS response to Requested Action 1) was complete, with the exception of "...an assessment of the potential for the introduction of debris or other materials that could clog the strainers since the pool was last cleaned." This submittal completes the response to Requested Actions 1) and 4).

The NRC Bulletin Requested Actions 1) and 4), and the GGNS response are:

Requested Action 1

Verify the operability of all pumps which draw suction from the suppression pool when performing their safety functions (e.g., ECCS, containment spray, etc.), based on an evaluation of suppression pool and suction strainer cleanliness conditions. This evaluation should be based on the pool and strainer conditions during the last inspection or cleaning and an assessment of the potential for the introduction of debris or other materials that could clog the strainers since the pool was last cleaned.

GGNS Response

The initial GGNS response to this Requested Action addressed the verification of operability of all pumps which draw suction from the suppression pool. The initial response did not address the potential for the introduction of debris or other materials that could clog the strainers since the pool was last cleaned, due to the light debris found on the RHR "A" and "B" suction strainers.

The debris found on these two strainers was sent to the General Electric Materials Characterization Laboratory. Analysis revealed that the debris represented an assortment of materials - nylon, polyester, polypropylene, and polyethylene. Several candidate materials used to support refueling outage work were sent to the same facility for possible identification as the source of the debris. Some of the items were possible contributors, but none were sole contributors.

During the last refueling outage, the suppression pool was cleaned prior to the termination of significant containment work activities. Recent assessments of the RHR strainer debris event determined that the timeliness of suppression pool cleaning should be optimized to coincide with the end of containment work activities during refueling outages. Therefore, any debris that is introduced into the suppression pool as a result of refueling outage maintenance activities will be removed during the post cleaning process. Also, GGNS has implemented a separate Foreign Material Exclusion (FME) procedure which incorporates several safeguards regarding suppression pool cleanliness. GGNS will continue to modify and enhance the FME process to provide assurance that the ECCS suppression pool strainers will remain free from operational debris.

Requested Action 4

Review FME procedures and their implementation to determine whether adequate control of materials in the drywell, suppression pool, and systems that interface with the suppression pool exists. This review should determine if comprehensive FME controls have been established to prevent materials that could potentially impact ECCS operation from being introduced into the suppression pool, and whether workers are sufficiently aware of their responsibilities regarding FME. Any identified weaknesses should be corrected. In addition, the effectiveness of the FME controls since the last time the suppression pool was cleaned and the ECCS strainers inspected, and the impact that any weaknesses noted may have on the operability of the ECCS should be assessed.

GGNS Response

In response to the Institute of Nuclear Power Operations SOER 95-1, "Reducing Events From Foreign Material Intrusion", GGNS has been developing a new plant program that provides additional guidance regarding FME. An independent FME procedure has been recently issued, and training is in progress to inform plant personnel of programmatic changes resulting from this new procedure. Several sections of this new procedure alert plant personnel to the prevention of foreign material into systems or components that could potentially block or clog the suppression pool suction strainers. Also, the existing procedure related to housekeeping has been revised to require the suppression pool and strainers to be inspected prior to each plant startup and on a periodic basis during plant power operations, and establishes an acceptance criteria. Plant personnel are required to be trained on the housekeeping procedure to familiarize them with the necessities and requirements of housekeeping and cleanliness control.

The new FME procedure and the housekeeping procedure require all personnel to report any items dropped in the suppression pool to the control room shift superintendent/supervisor. Each procedure also provides guidelines regarding control of materials that could potentially clog a suppression pool suction strainer if left inside of containment, and thereby transported to the suppression pool during a design basis loss-of-coolant accident.

On June 6, 1996, GGNS experienced a plant transient similar in nature to the event described in NRC Bulletin 95-02. An inadvertent opening of six Main Steam Safety/Relief Valves required simultaneous operation of both loops of the Residual Heat Removal System in the suppression pool cooling mode. After this event, the ECCS suppression pool strainers were inspected and found to be clean, with the exception of the light dusting of fine silt that coats the suppression pool horizontal surfaces during each operational cycle.

The incorporation of a new FME program, in addition to the previously described enhancements regarding suppression pool cleanliness, provides reasonable assurance that the suppression pool suction strainers will perform their intended function during all modes of plant operation.

BEFORE THE  
UNITED STATES NUCLEAR REGULATORY COMMISSION

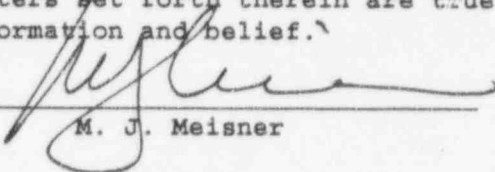
LICENSE NO. NPF-29

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

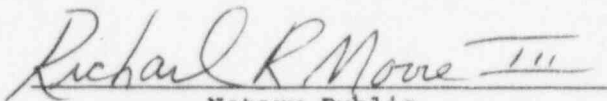
I, M. J. Meisner, being duly sworn, state that I am Director, Nuclear Safety and Regulatory Affairs, GGNS of Entergy Operations, Inc.; that on behalf of Entergy Operations, Inc., System Energy Resources, Inc., and South Mississippi Electric Power Association I am authorized by Entergy Operations, Inc. to sign and file with the Nuclear Regulatory Commission, this follow-up response to NRC Bulletin 95-02 for the Grand Gulf Nuclear Station; that I signed this application as Director, Nuclear Safety and Regulatory Affairs, 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.

  
M. J. Meisner

STATE OF MISSISSIPPI  
COUNTY OF CLAIBORNE

SUBSCRIBED AND SWORN TO before me, a Notary Public, in and for the County and State above named, this 7<sup>th</sup> day of October, 1996.

(SEAL)

  
Notary Public

My commission expires:  
MISSISSIPPI STATEWIDE NOTARY PUBLIC  
MY COMMISSION EXPIRES JUNE 5, 1998  
BONDED THRU STEGALL NOTARY SERVICE