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April 24, 1996

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
Fuel Handling Accident Operational Conditions
Proposed Amendment to the Operating License
Additional Information

Reference: 1. GNRO-95/00090, Fuel Handling Accident Operational Conditions, Proposed Amendment to the Operating License (PCOL-93/08 Revision 1), dated August 4, 1995.

2. GNRO-94/00131, Fuel Handling Accident Operational Conditions, Proposed Amendment to the Operating License (PCOL-93/08), dated November 9, 1994.

GNRO-96/00048

Gentlemen:

Entergy Operations, Inc. (EOI) is submitting by this letter additional information concerning a proposed amendment to the Grand Gulf Nuclear Station (GGNS) Operating License. Reference 1 transmitted requested Technical Specification changes which would remove the requirements for secondary containment during shutdown when no credit is taken for it in mitigating the dose consequences of any accident. This letter provides additional information concerning the need for the timely approval of the requested changes and requests a meeting with the Staff to discuss the resolution of any issues associated with the requested change.

This letter was prompted by two factors.

1) As discussed below, GGNS will shortly need to perform significant work on the secondary containment boundary due to degradation of the enclosure building roofing materials.

2) We understand that the Staff's delay in processing the requested change was due to a lack of Staff consensus concerning the role of containment integrity during shutdown conditions. Since we last met on January 4, 1996, the Staff has published a draft shutdown rule and regulatory guide which address the need for

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containment integrity during shutdown. During the recent Regulatory Information Conference session on the draft shutdown rulemaking Mr. Gary Holohan confirmed that the time seemed appropriate to revisit the requested Technical Specification changes in light of the Staff positions on containment contained in the draft rulemaking.

A. STATUS OF REQUEST

EOI has been working with the Staff for an extended period of time to resolve issues associated with the proposed change. The following summarizes the history of the requested change:

1. GGNS originally proposed the requested changes on November 4, 1994, approximately 4 1/2 months prior to the last refueling outage. Due to other priorities the Staff was unable to complete their review in time to support the April 1995 refueling outage.

2. To reduce Staff resource demands, and at the request of the NRC, GGNS collaborated with the other BWR 6's (Clinton Power Station, Perry Nuclear Power Plant, and River Bend Station) in developing a joint approach. The group met with the Staff on July 20, 1995 and discussed the basis for the proposed changes and the generic aspects of the proposed changes to the Technical Specifications. In this meeting GGNS discussed the dose analyses that had been performed and why the requested change did not have a significant impact on shutdown risk. Following this meeting GGNS updated the request (Reference 1) to reflect the information provided in the meeting.

3. With approval of the change imminent, the BWR 6s were notified in November, 1995 that NRC management felt additional work was necessary to clarify the role of containment during shutdown conditions.

4. The BWR 6's again met with the Staff and NRR management on January 4, 1996. In this meeting the Technical Specification Improvement rule was reviewed with the Staff to demonstrate that removal of these requirements was in accordance with the rule. In this meeting we reiterated why the change does not have a significant impact on shutdown risk and reviewed our intentions with respect to containment closure. Also, during this meeting the Staff expressed a desire for the issue to be resolved more generically than just the BWR 6's.

5. In response the Staff's desire for the issue to be resolved more generically than just the BWR 6's, EOI has voluntarily worked with the Nuclear Energy Institute's (NEI's) Technical Specification Task Force to propose the appropriate Technical Specifications for all reactor types. The results of this effort were transmitted to the Staff via letter from NEI on March 28, 1996. The generic changes proposed are consistent with GGNS's requested changes.

B. ENCLOSURE BUILDING CONDITION

Over the years as leaks have developed in the enclosure building roof the affected areas have been patched to stop the leakage. As the roof has aged the frequency of the leaks and thus the required repairs has increased. Also, in the past year GGNS has experienced severe weather which included significant hail. These two factors have resulted in multiple leaks through the roofing. To date, the leakage has not adversely affected the function of any safety equipment within the enclosure building nor has the leakage adversely affected the ability of the enclosure building to perform its safety function.

GGNS currently plans to repair the enclosure building deck roofing overlay materials during the Fall 1996 refueling outage. This repair introduces the possibility of causing secondary containment inoperability especially while the old roofing is being removed and during the initial reinstallation work.

C. DESIGN DESCRIPTION

The secondary containment at Grand Gulf Nuclear Station (GGNS) consists of the auxiliary building and the enclosure building. The auxiliary building is a reinforced concrete structure which completely surrounds the lower portion of the containment, and the enclosure building is a metal-siding structure which completely surrounds the containment above the auxiliary building roof line. The enclosure building has a metal decking roof which by design was sealed sufficiently to support the inleakage requirements of the secondary containment. To protect the metal decking and associated sealant (e.g., caulking) the roof decking was overlaid with approximately 2 inches of insulation, several layers of fiberglass felt, gravel, and asphalt.

The fuel handling area and the auxiliary building ventilation systems maintain the secondary containment at a slightly negative pressure during normal operation. These nonsafety systems assure that no ambient air escapes from the fuel-handling area during fuel handling operations without first being monitored and treated for airborne radioactivity. Upon detection of high radioactivity, the standby gas treatment system is initiated and these systems are isolated.

The standby gas treatment system (SGTS) maintains the secondary containment at a negative pressure and provides cleanup of the potentially contaminated secondary containment volume following a design basis accident. Following actuation, the system draws air from the auxiliary building, mixes this air with air drawn from the enclosure building, and returns the mixed air to the enclosure building. A portion of the mixed air is exhausted via a charcoal filter assembly to maintain the SGTS boundary region at a negative pressure.

Adequate leaktightness of the secondary containment is demonstrated every 18 months by running one of the two SGTS subsystems and verifying that the secondary containment reaches (within 120 seconds) and maintains the design differential pressure with respect to the environment. These tests have always been performed with the protective layers installed over the metal decking thereby contributing to the leaktightness of the building.

D. OPTIONS

As a result of the age and hail induced degradation of the roofing material the enclosure building is in need of major repair to stop the leaks and the resulting degradation of the enclosure building. This repair can be performed one of two ways:

1. patching the current roofing material, or

2. replacing the roofing material.

Each of these options have specific benefits and drawbacks. An overview of the options is discussed in more detail below.

1. Patching the current roofing material

   Patching the current roof would include activities such as adding additional asphalt to damaged areas of the existing roofing, covering the current roofing material with another layer of roofing material, and removing the most damaged areas of the roofing and building the roofing back up. Patching the current roof would be an ongoing process with leaks being patched as they are identified and the source of the leak located. Since the roofing will continue to rely on the current degraded roofing as the base material it is expected that the frequency of the leaks occurring will continue to increase as the roofing ages further.

   Patching the current roofing in the short term is the cheapest, easiest, and fastest way to stop the leaks in the enclosure building roof. Additionally while patching the roof the operability of the secondary containment should not be affected; therefore, the repair work can easily be performed in any plant condition. But patching the current roofing is also the least effective of the options available since the new roofing material will continue to rely on the current degraded roofing material.

2. Replacing the roofing material

   The longest term solution is to remove and replace the current degraded roofing material. This will allow the fewest number of seams in the material to be left as sites of future degradation and will allow for the most comprehensive inspection for degradation of the underlying roofing material. Unfortunately, this method may also result in inoperability of the enclosure building.

   As discussed above, the enclosure building metal decking and associated sealant is by design sufficient to support the leaktightness requirements of the secondary containment. But the inleakage tests have always been performed with the roofing protective layers installed over the metal decking thereby contributing to the leaktightness of the building. Although unlikely, the possibility exists that removing the roofing material may result in an unacceptable increase in air leakage and consequent inoperability of the enclosure building. But removing the material is not the only reason secondary containment could become inoperable during the activity. The metal decking could be damaged by the repair activities or when the roofing material is removed it may be identified that the metal decking is degraded.

If the enclosure building cannot achieve (within 120 seconds) and maintain a 1/4" inch negative pressure then it cannot be assured that radioactive materials are not leaking unfiltered to the environment. The effect of this unfiltered leakage is exacerbated by the design of the SGTS. The design of the SGTS, as discussed above, is to draw air from the potentially contaminated areas in the auxiliary building, mix it with air drawn from the enclosure building, filter and discharge ≈ 25% of the resulting mixture, and return the rest of the mixture to the enclosure building. In effect, should the enclosure building leaking excessively, operation of the SGTS could result in the increased release of unfiltered contaminated air into the environment. In this case SGTS operation is undesirable.

Replacing all of the roofing material is the best and longest term solution to the current degraded condition of the roofing. But this option introduces the possibility of enclosure building inoperability and operation of SGTS in a manner adverse to safety. However, as demonstrated in our referenced submittals, the proper scheduling of work during shutdown conditions obviates the need for secondary containment and SGTS operability.

E. TECHNICAL SPECIFICATION CHANGES REQUESTED

The requested changes remove the OPERABILITY requirements for the secondary containment and control room and the associated support systems for the OPERABILITY of the secondary containment and control room when no credit is taken for these structures to mitigate the consequences of any accident. The details of the requested changes and the associated justification can be found in GGNS's letter dated August 4, 1995 (Reference 1).

Also identified in Reference 1 is a commitment by GGNS concerning the ability to restore the containment function. In addition to preexisting commitments concerning the containment function, this commitment reflects GGNS's intention to control radioactive releases following an accident and work with the Staff to satisfy any concerns in this area.

F. WHY THE REQUESTED CHANGES SHOULD BE REVISITED

The requested changes are needed for the upcoming outage to support full removal and replacement of the roofing material for the following reasons:

1. The repair option of patching the roof is only a short-term expedient and it provides little opportunity to identify and repair any degradation to the underlying roofing.

2. The option of replacing the roofing material is the best option for precluding future degradation of the secondary containment boundary and identifying and replacing any current degradation. Because the enclosure building metal decking and associated sealant is by design sufficient to support the leaktightness requirements of the secondary containment, this option could be performed during operation or shutdown conditions. But this option does introduce the possibility of causing

secondary containment inoperability especially while the old roofing is being removed and during the initial reinstallation work.

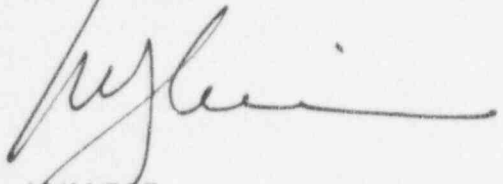
3. Removal and replacement of roofing material will require a period of time comparable to a significant fraction of the upcoming refueling outage schedule. Given the potential for creating a condition where secondary containment is inoperable, roofing work with the highest risk of causing secondary containment inoperability could not be scheduled when secondary containment was required. As a consequence, the enclosure building roofing repairs may lead to a significant outage extension without improving safety.

In addition to the urgency associated with the refueling outage repairs, we believe it is appropriate to revisit this issue because the Staff has crystallized its thinking on the role of containment during shutdown conditions. The recently published draft shutdown rulemaking and regulatory guide discuss the need for containment integrity in terms of a core damage event. We believe that the rulemaking approach bounds the requested change and that this change provides a convenient opportunity to extend the rulemaking concepts to a fuel handling accident.

In summary, approval of the requested TS change will allow EOI to perform a long-term repair of the enclosure building roof without incurring either a significant economic impact through an extended refueling outage, or delaying the repair in favor of localized repairs. Consequently, we request your timely review to support the Fall 1996 refueling outage and would be happy to meet with the Staff to respond to questions.

The information presented in this submittal does not affect the bases or conclusions of Reference 2.

Yours truly,



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