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March 4, 1994

**C. R. Hutchinson**  
Vice President  
Operations  
Grand Gulf Nuclear Station

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

Attention: Document Control Desk

SUBJECT: Grand Gulf Nuclear Station  
Unit 1  
Docket No. 50-416  
License No. NPF-29  
Request for Enforcement Discretion from Compliance with Technical  
Specification Required Action, Standby Service Water System

GNRO-94/00037

Gentlemen:

In a telephone conference on March 4, 1994, we informed the NRC staff of the need for enforcement discretion from the requirements of Technical Specification 3.7.1.1 ACTION a.1, Technical Specification 3.8.1.1 ACTION d, Surveillance Requirement 4.3.9.2a and Surveillance Requirement 4.1.3.1.2a. The Technical Specification ACTIONS require that the inoperable Standby Service Water (SSW) subsystem be restored to OPERABLE status within 72 hours or that the unit be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

The B SSW subsystem was declared inoperable at 1414 on March 3, 1994; therefore, the time allowed for continued operation would end at 1414 on March 6, 1994. The B SSW pump has been experiencing high vibration which may take until 1414 on March 10, 1994 to repair.

As a result, enforcement discretion was requested to extend the 72 hour limit on continued operation contained in Technical Specification 3.7.1.1 ACTION a.1 and Technical Specification 3.8.1.1 ACTION d to 7 days. Also, the required performance of the surveillances were requested to be delayed until March 11, 1994. The extensions to the Technical Specification required ACTIONS will provide sufficient time to repair the inoperable SSW subsystem and prevent a unit shutdown. The extension in the surveillance intervals provides sufficient time for the degraded condition to be exited prior to the required performance of the surveillances.

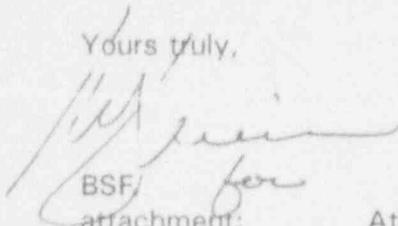
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Entergy Operations, Inc. is submitting, by this letter, written documentation supporting our verbal request for enforcement discretion. At approximately 1520 on March 4, 1994 NRC Region II verbally approved our request for enforcement discretion. This request has been accepted by the Plant Safety Review Committee. Based on the guidelines of 10CFR50.92, Entergy Operations has concluded that this request involves no significant hazards considerations.

Yours truly,



BSF  
attachment:  
cc:

Attachment to GNRO-94/00037

Mr. R. H. Bernhard (w/a)  
Mr. H. W. Keiser (w/a)  
Mr. R. B. McGehee (w/a)  
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State Health Officer  
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I. Discussion of the Requirements for which Enforcement Discretion is Requested

Enforcement discretion is requested for the following requirements:

1. Technical Specification Limiting Condition for Operation (LCO) 3.7.1.1, "Standby Service Water System," requires that both the A and the B Standby Service Water (SSW) subsystems be OPERABLE in Operational Conditions 1, 2, 3, 4 and 5 and when handling irradiated fuel in the primary or secondary containment. Technical Specification LCO 3.7.1.1 ACTION a.1 requires an inoperable Standby Service Water (SSW) subsystem be restored to OPERABLE status within 72 hours or that the unit be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours. An extension of the 72-hour allowed out of service time by 4 days, to a 7-day allowed out of service time, is requested.
2. Technical Specification LCO 3.7.1.1 ACTION f requires the associated diesel generator be declared inoperable and the required actions of LCO 3.8.1.1, "A.C. Sources - Operating," for an inoperable diesel generator be taken. LCO 3.8.1.1 ACTION b requires that the inoperable diesel generator be restored to OPERABLE status within 72 hours or that the unit be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours. An extension of the 72-hour allowed out of service time by 4 days, to a 7-day allowed out of service time, is requested.
3. LCO 3.3.9, "Turbine Overspeed Protection System," Surveillance Requirement 4.3.9.2a requires the cycling of the turbine stop and control valves every 14 days. This surveillance is required to be performed by midnight March 8, 1994. The surveillance interval is requested to be extended to midnight March 11, 1994 to defer this testing until the degraded condition has been corrected.
4. LCO 3.1.3.1, "Control Rod Operability," Surveillance Requirement 4.1.3.1.2a requires the movement of all OPERABLE withdrawn control rods. This surveillance is required to be performed by midnight March 6, 1994. The surveillance interval is requested to be extended to midnight March 11, 1994 for all partially withdrawn OPERABLE control rods to defer this testing until the degraded condition has been corrected. This change is consistent with the Technical Specification change requested on April 1, 1993 which is pending for this Surveillance Requirement (Reference 1).

II. Circumstances Surrounding the Need for Enforcement Discretion

The B SSW subsystem was declared inoperable at 1414 on March 3, 1994; therefore, the time allowed for continued operation would end at 1414 on March 6, 1994. The B SSW pump had been experiencing high vibration which resulted in its being declared inoperable on March 3 and, in the early morning of March 4, it was identified that extensive repairs may be required which may take until 1414 on March 10, 1994 to complete.

As a result, enforcement discretion is requested to extend the 72 hour limit on continued operation contained in Technical Specification 3.7.1.1 ACTION a.1 and Technical Specification 3.8.1.1 ACTION b to 7 days. Also, the required performance of Surveillance Requirement 4.3.9.2a and Surveillance Requirement 4.1.3.1.2a is requested to be delayed until March 11, 1994. These extensions will provide sufficient time to repair the inoperable SSW subsystem and avoid plant perturbations consistent with the compensatory actions described below.

III. Compensatory Actions

As compensatory measures Grand Gulf proposes the following:

**General Measures**

- Increased plant around the clock staffing, including management personnel.
- Voluntary maintenance and surveillance activities on Division 1 and Division 3 (the unaffected divisions) will be suspended for the duration of the enforcement discretion.

**Electrical Measures**

- All three offsite power sources are available (two are required by Technical Specifications).
- The load dispatcher has been requested to suspend work which could affect the stability to the GGNS offsite power sources.
- Modification work has been suspended in the GGNS switchyard and in the plant related to the site power loop.
- The electrical cross tie of the Division 3 diesel generator to selected Division 2 loads is proceduralized. The procedure for performing this activity will be reviewed by licensed Operations shift personnel.
- The weather forecasts for the area will be monitored. Currently the forecasts do not show any major storms in the area.

**Other Systems**

- All Division 1 and Division 3 equipment will be maintained OPERABLE.
- The Reactor Core Isolation Cooling (RCIC) system will be maintained OPERABLE and the RCIC surveillance will be postponed.
- The Division 1 and the Division 3 diesel generators have been quick started.

- The Division 1 and the Division 3 service water pumps have been vibration tested.
- Alternate cooling measures have been planned and the equipment staged to provide cooling to the A SSW pump room.
- The equipment for the alternate water injection in the event of a Loss of Coolant Accident (LOCA) using the fire water system have been planned and the equipment staged.

#### Division 2

- All ECCS pumps will be maintained available for auto injection.
- Alternate cooling measures have been planned and the equipment staged to provide cooling to the Division 2 Emergency Core Cooling System pump rooms.

#### Surveillances

- Verified that no surveillances are currently scheduled which would require equipment to be taken out of service.
- Verified that no surveillances are currently scheduled which would affect electrical power availability.
- Verified that no surveillances would be performed which could cause a plant transient. The two surveillances for which enforcement discretion is requested are the only two identified.

These compensatory measures will be added to the "night orders" and will be reviewed in pre-shift briefings for the oncoming Operations shifts.

#### IV. Preliminary Evaluation of the Safety Significance and Potential Consequences of the Proposed Request

The currently degraded condition of train B of the SSW system has two potential outcomes: either the plant is maintained in an at-power condition for an additional period of four days to effect repairs to the SSW B pump, or the plant proceeds to cold shutdown in accordance with the Technical Specifications. In assessing the safety significance and potential consequences of the proposed enforcement discretion, it is necessary to characterize the effects on plant safety for these two conditions.

In assessing the safety effects of the proposed enforcement discretion (i.e., maintaining the plant in an at-power condition), Grand Gulf compared the risk effects of extending the SSW allowed outage time (AOT) to seven days with the risk effects of Technical Specification AOTs for other safety-significant systems

such as HPCS (14 day AOT), RCIC (14 day AOT) and LPCI 'C' (7 day AOT). The comparison demonstrated that the risk increase due to extending the SSW AOT was comparable to or less than that associated with the system AOTs examined. In other words, the safety effects of the proposed extension were bounded by safety effects already allowed by Technical Specifications and do not, therefore, constitute a significant decrease in safety.

The compensatory measures discussed above will serve to further reduce any adverse safety effects of continued power operation. Although we have not formally modeled these effects, based upon work associated with the IPE submittal, it appears that a single compensatory measure (SSW A pump house fan cooling) will result in risk reduction essentially equivalent to the risk increase due to four additional days of SSW B AOT.

On the other hand, shutting the plant down to effect repairs does have a substantial effect on shutdown safety. Because SSW B is a support system for RHR systems, the plant would be shut down with only one available RHR train and no opportunity to provide an alternate RHR system in under 24 hours after shutdown.

Grand Gulf has routinely employed a shutdown PRA model for several years in evaluating shutdown safety effects. Over that time, the sensitivity of shutdown risk to the level of RHR redundancy, particularly during the first few days of an outage, has been clearly demonstrated. A plant shutdown under degraded SSW B conditions will increase shutdown risk by approximately a factor of three over a normal shutdown with both RHR trains available.

While we cannot yet quantitatively compare at-power risk effects to shutdown risk effects with a good deal of confidence, it is our judgment that the increase in at-power risk is small (or negligible when considering the effects of compensatory measures) while the potential effect on shutdown conditions could be substantial. For this reason we believe that the relative safety significance of the proposed enforcement discretion is low and the potential consequences of the proposed request is preferable to the potential consequences associated with plant shutdown.

V. Justification of Enforcement Discretion Duration

The temporary enforcement discretion is requested until 1414 on March 10, 1994 for the Technical Specification required ACTIONS and 2400 on March 11, 1994 for the Surveillance Requirements. During this period, Grand Gulf proposes to conduct parallel activities to restore the subsystem to OPERABLE status and to minimize the risk associated with the degraded condition.

VI. No Significant Hazards Considerations

1. The Commission has provided standards for determining whether a no significant hazards consideration exists. The enforcement discretion involves no significant hazards consideration if operation of the facility in accordance with the enforcement discretion would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety.
2. Entergy Operations has evaluated the no significant hazards considerations associated with this request for enforcement discretion as follows:
  - a. No significant increase in the probability or consequences of an accident previously evaluated results from this change.

The Standby Service Water (SSW) system and its associated diesel generator are not the initiators of any evaluated accident and the normal method of plant cooling, Plant Service Water (PSW), is unaffected by this condition. Therefore, this extension in the allowed out of service time does not result in a significant increase in the probability of an accident previously evaluated.

The extension of the surveillance interval for the turbine testing and the control rod movement testing does not affect the initiators of any evaluated accident. Therefore, this extension in the allowed out of service time does not result in a significant increase in the probability of an accident previously evaluated.

In addition the following compensatory actions are being taken to provide an added level of assurance that the unaffected safety systems remain OPERABLE and that the probability of accident precursors is minimized.

**General Measures**

- Increased plant around the clock staffing, including management personnel.
- Voluntary maintenance and surveillance activities on Division 1 and Division 3 (the unaffected divisions) will be suspended for the duration of the enforcement discretion.

#### Electrical Measures

- All three offsite power sources are available (two are required by Technical Specifications).
- The load dispatcher has been requested to suspend work which could affect the stability to the GGNS offsite power sources.
- Modification work has been suspended in the GGNS switchyard and in the plant related to the site power loop.
- The electrical cross tie of the Division 3 diesel generator to selected Division 2 loads is proceduralized. The procedure for performing this activity will be reviewed by licensed Operations shift personnel.
- The weather forecasts for the area will be monitored, currently the forecasts do not show any major storms in the area.

#### Other Systems

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- Alternate cooling measures have been planned and the equipment staged to provide cooling to the Division 2 Emergency Core Cooling System pump rooms.

## Surveillances

- Verified that no surveillances are currently scheduled which would require equipment to be taken out of service.
- Verified that no surveillances are currently scheduled which would affect electrical power availability.
- Verified that no surveillances would be performed which could cause a plant transient. The two surveillances for which enforcement discretion is requested are the only two identified.

These compensatory measures will be added to the "night orders" and will be reviewed in pre-shift briefings for the oncoming Operations shifts.

Without additional failures the safety systems will remain available to support the accident analysis presented in the UFSAR for GGNS. The compensatory actions being taken are providing an added level of assurance that these unaffected safety systems remain OPERABLE and that the consequences of previously analyzed accidents are not significantly increased.

Therefore, the requested enforcement discretion does not result in a significant increase in the probability or consequences of an accident previously evaluated.

- b. The change would not create the possibility of a new or different kind of accident from any previously analyzed.

The requested change will not create any new modes of plant or equipment operation. Therefore, operating the plant with the proposed change will not create the possibility of a new or different kind of accident from any accident previously evaluated.

- c. This change would not involve a significant reduction in a margin of safety.

In assessing the safety effects of the proposed enforcement discretion (i.e., maintaining the plant in an at-power condition), Grand Gulf compared the risk effects of extending the SSW allowed outage time (AOT) to seven days with the risk effects of Technical Specification AOTs for other safety-significant systems such as HPCS (14 day AOT), RCIC (14 day AOT) and LPCI 'C' (7 day AOT). The comparison demonstrated that the risk increase due to extending the SSW AOT was comparable to or less than that associated with the system AOTs examined. In other words, the safety effects of the proposed extension were bounded by safety effects already allowed by Technical Specifications and do not constitute a significant decrease in safety. Therefore, operating the plant with the proposed change will not involve a significant reduction in a margin of safety.

- 4. Based on the above evaluation, operation in accordance with the proposed enforcement discretion involves no significant hazards considerations.

VII. Basis That The Request Does Not Involve Irreversible Environmental Consequences

Entergy Operations has evaluated the requested enforcement discretion against the criteria for categorical exclusion specified in 10CFR51.22. We have concluded that the proposed enforcement discretion:

- (i) involves no significant hazards consideration,
- (ii) does not significantly change the types or increase the amounts of any effluents that may be released offsite, and
- (iii) does not significantly increase individual or cumulative occupational radiation exposure.

Therefore, we have concluded that the enforcement discretion does not involve irreversible environmental consequences and meets the eligibility criteria for categorical exclusion set forth in 10CFR51.22(c)(9).

VIII. References

- 1. GNRO-93/00036, Control Rod Drive Surveillance Testing Per NUREG-1434, Proposed Amendment to the Operating License (PCOL-92/08), dated April 21, 1993.