ENTERGY

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October 22, 1993

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

Attention: Document Control Desk

SUBJECT: Grand Gulf Nuclear Station
Unit 1
Docket No. 50-416
License No. NPF-29
Drywell Bypass and Drywell Airlock Testing
Proposed Change to the Operating License (PCOL-93/13)

Reference: NUREG-1434, Revision 0 of the Improved Standard Technical Specifications

GNRO-93/00122

Gentlemen:

Pursuant to 10 CFR 50.90, Entergy Operations, Inc. is hereby proposing to amend Operating License NPF-29 for the Grand Gulf Nuclear Station (GGNS) by incorporating the enclosed changes into the plant technical specifications.

Specifically, the proposed changes would amend Technical Specifications by modifying the testing frequencies for the drywell bypass test and airlock tests, relocating certain drywell airlock tests from the technical specifications to our administrative control, and incorporating various improvements from the Improved Standard Technical Specifications (NUREG-1434, Revision 0). Ultimately, our goal is to evaluate the drywell airlock testing proposed for relocation against regulatory and safety requirements and eliminate overly restrictive requirements under 10 CFR 50.59 while maintaining an equivalent level of protection.

This proposed amendment is being submitted as part of the cost beneficial licensing action (CBLA) program established within NRR where increased priority is granted to licensee requests for changes requiring staff review that involve high cost without a commensurate safety benefit. Although the change does have safety benefit (e.g., occupational dose reduction due to reduced testing), its major benefit is economic. Grand Gulf expects cost reductions of at least $10 million over the remaining plant life due mostly to reduced surveillance requirements.

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As you know, Grand Gulf has made, and intends to make, further submittals under the CBLA program. Because of this, the staff requested in our June 8 meeting that CBLA submittals be clearly prioritized. Accordingly, in cases where the drywell bypass and drywell airlock request is competing with another of our submittals for the same staff review resources, the proposed drywell amendment should receive medium priority treatment.

Attachment 1 contains the affirmation for this proposed change as required by 10 CFR 50.30(b). Attachment 2 provides a detailed description of the proposed changes, justification for the changes, and the No Significant Hazards Consideration in accordance with 10 CFR 50.92. As stipulated by the provisions of 10 CFR 50.4, Attachment 3 contains the original marked up technical specification and bases pages reflecting the proposed change. A copy of the proposed change is provided for information in Attachment 4.

The proposed changes have been reviewed and accepted by the Plant Safety Review Committee and the Safety Review Committee. A copy of this proposed change to the operating license has been provided to the State of Mississippi in compliance with the requirements of 10 CFR 50.91(b)(1).

Should you have any questions, please contact Mr. B. A. Burke at (601) 437-6333.

Yours truly,

CRH/GAZ/BAB
attachments: 1) Affirmation per 10 CFR 50.30
2) GGNS PCOL-93/13
3) Mark-up of Affected Technical Specifications
4) Informational Copy of Proposed Technical Specification Pages
cc: (see next page)

cc:

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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, C. R. Hutchinson, 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.

C. R. Hutchinson

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 22nd day of October, 1993.

(SEAL)

Elizabeth L. Long
Notary Public

My commission expires:

December 28, 1995

PCOL-93/13

DRYWELL BYPASS AND DRYWELL AIRLOCK TESTING

DISCUSSION AND JUSTIFICATION

A. **SUBJECT:** Technical Specification (TS) Changes Involving Drywell Bypass Leakage and Drywell Airlock Testing

Affected TS and Pages: TS 1.10 - page 1-2

TS 3/4.6.2.1 - page 3/4 6-13

TS 3/4.6.2.2 - page 3/4 6-14

TS 3/4.6.2.3 - page 3/4 6-15,16

TS Bases 3/4.6.2.3 - page B 3/4 6-3

B. **BACKGROUND :**

Containment and Drywell Design

The Mark III containment was designed to be an improved containment for boiling water reactors compared to the former Mark I and Mark II containment designs. An objective of the design was to locate more of the high energy auxiliary systems (e.g., reactor water cleanup system heat exchangers) within the pressure-suppression containment. The Mark III containment design basically features a separate volume within the primary containment to encapsulate the reactor coolant system and other high energy system piping. This volume is referred to as the drywell; the volume outside the drywell but within the primary containment is referred to as the wetwell. High energy lines transitting through the wetwell such as the main steam lines and feedwater lines are encapsulated by guard pipes or enclosures to direct energy to the drywell in case of a piping rupture.

The drywell is designed to divert the energy released (pressure, mass, and heat) as a result of a design basis large break loss-of-coolant-accident (LOCA) to the suppression pool via multiple vents cast into the drywell wall. The suppression pool is a mass of water common to the drywell and wetwell volumes and serves as a heat sink for the energy released during a large break LOCA. The 135 horizontal vents in the drywell wall are beneath the normal water level of the suppression pool. The suppression pool forms a water seal between the drywell and wetwell volumes. These volumes are assured per TS 3/4.5.3 (Ref. 1) which specifies the minimum suppression pool water level.

The safety function of the Mark III containment is contingent on the integrity of the drywell. Leakage through the drywell which bypasses the suppression pool has a

direct impact on the containment peak pressure analysis. Analyses of the containment design assumed limited drywell bypass leakage as a design basis. Mark III containment design efforts included evaluating a spectrum of break sizes to assure that the pressure-suppression containment would perform its safety function. The small break LOCA within the drywell was determined to be the limiting fault accident for the drywell design criterion of bypass leakage and is discussed in UFSAR Section 6.2.1.1.3 (Ref. 2). The limiting case for drywell integrity is based on total leakage through [redacted] aths other than the drywell-to-suppression pool vents.

The dry[redacted]s 1 seismic structure and features reinforced concrete walls and floor in a vertical right cylinder geometry. The ceiling is also reinforced concrete with a removable steel dome known as the drywell head. The floor is common with the containment basemat.

Penetrations through the drywell enable the passage of piping, ventilation, and electrical portions of various systems. Electrical penetrations feature a sealing medium which surrounds the cables within the penetration. Ventilation and piping penetrations feature manual or automatic isolation valves; some piping penetrations and the vacuum breakers feature check valves and/or isolation valves. The drywell equipment hatch and drywell personnel airlock also penetrate the drywell boundary. The 10 foot by 10 foot equipment hatch is designed to be removed during plant outages. The equipment hatch utilizes two compression seals to maintain leaktightness.

The drywell airlock is designed to provide personnel access (ingress and egress) to the drywell for maintenance while its safety function is to maintain drywell integrity. The drywell airlock features two doors. Each airlock door closes positively against the airlock structure by means of a latching mechanism. The drywell airlock door latching mechanisms are interlocked to each other to ensure that at least one door is maintained in the latched closed position. The latching and interlock mechanisms ensure that the drywell airlock does not provide a gross leakage path and compromise drywell integrity. Each of the two drywell airlock doors features two inflatable o-ring seals to minimize leakage through the airlock.

The Grand Gulf Nuclear Station (GGNS) drywell is designed to perform its safety function with a calculated maximum bypass leakage rate of 35,000 standard cubic feet per minute (scfm) for its limiting fault. The limiting fault for the drywell is the postulated small break LOCA. The containment is designed to perform its safety function with a calculated maximum drywell bypass leakage rate of 840,000 scfm for the large break LOCA which assumed a differential pressure of 30 psi drywell-to-containment.

Preoperational Testing

The preoperational testing program for the drywell also included extensive monitoring

for structural deformation while the drywell was pressurized to its rated pressure in a graduated fashion (i.e., step pressure increases). The drywell performed better than anticipated during this phase. Results indicated that the drywell was not stressed as much as predicted and responded in the elastic stress range. In addition, no visible signs of permanent damage to either the concrete or liner were detected. A measured leakage rate of 3,200 scfm was recorded for the drywell structure during the preoperational test for drywell bypass at a differential pressure of 30 psi with the containment open to the atmosphere and the drywell-to-suppression pool vents sealed. Therefore, the design and construction of the drywell was deemed sufficient to maintain the design pressure load. Additional details of the preoperational testing program for the drywell structure are described in GGNS UFSAR Section 3.8.3.7.

C. PROPOSED TS CHANGES

Currently the GGNS Technical Specifications (TSs) provide detailed operability and surveillance requirements for the drywell and the drywell airlock. These details are in many cases in excess of the guidance of NUREG-1434, Standard Technical Specifications, General Electric Plants, BWR/6 (Ref. 3). GGNS proposes to modify the TS to reflect appropriate portions of the guidance of NUREG-1434 (including relocated required surveillances and other editorial changes).

In addition, GGNS proposes to relocate drywell airlock seal operability requirements to the UFSAR. This is a plant specific change consistent with the NRC's Final Policy Statement on Technical Specification Improvements for Nuclear Power Reactors.

Additionally, GGNS proposes to modify the frequency for performance of the drywell bypass leakage test consistent with a performance-based approach.

Specifically, GGNS proposes to make the following changes to TS 1.10, TS 3/4.6.2.1, TS 3/4.6.2.2 and TS 3/4.6.2.3:

1. TS 1.10, definition for DRYWELL INTEGRITY, is proposed to be changed to reflect the appropriate TS references.

2. The drywell leakage rate requirements of LCO 3.6.2.2 are proposed to be relocated into TS 3/4.6.2.1 (DRYWELL INTEGRITY) as a supporting surveillance.

3. The details relating to drywell design in TS 3/4.6.2.2 are proposed to be relocated to the TS Bases and the UFSAR.

4. Details of the methods for performing the drywell bypass surveillance in TS 4.6.2.2 are proposed to be relocated to the UFSAR.

5. TS 4.6.2.2.c is proposed to be deleted. TS 4.6.2.2.c presently prohibits use of the surveillance interval extension of 25% which would otherwise be allowed by TS 4.0.2.

6. The time interval between performances of the drywell bypass leakage test is proposed to be increased from 18 months to 10 years with an increased testing frequency required if performance degrades.

7. The TS LCO, actions, and surveillances for the drywell airlock (TS 3/4.6.2.3) are proposed to be made consistent with NUREG-1434 (Ref. 3) with the exception of some plant specific proposed changes covered by the following item.

8. The surveillances pertaining to drywell airlock seal leakage and operability (TS 4.6.2.3a, 4.6.2.3.d.2, 4.6.2.3.d.3) are proposed to be relocated to the UFSAR.

D. JUSTIFICATION

1. TS 1.10, definition for DRYWELL INTEGRITY, is proposed to be changed to reflect the appropriate TS references. This is an administrative change necessary to keep the Technical Specification number references consistent for drywell bypass leakage testing.

2. The drywell leakage rate requirements of LCO 3.6.2.2 are proposed to be relocated into TS 3/4.6.2.1 (DRYWELL INTEGRITY) as a supporting surveillance.

   Drywell leakage rate requirements are already the essence of DRYWELL INTEGRITY as noted in its TS definition (TS 1.10). This proposed change incorporates the improvements of NUREG-1434 (Ref. 3) to the extent practicable. In the revised presentation proposed, leakage rates discovered outside limits will result in entering the actions for DRYWELL INTEGRITY inoperability. The TS actions for this condition require commencing a shutdown to cold shutdown if the leakage is not corrected within one hour. Based on this limitation to continued operation, LCO 3.0.4 will not allow a reactor startup to commence with drywell bypass leakage outside the limit. The existing TS action only restricts heating up reactor coolant above 200° F and would allow a startup and control rod withdrawal from cold conditions (i.e., < 200° F). Should bypass leakage above the limit be discovered while operating, the existing TS action is non-specific as to the appropriate action to take. The proposed TS action provides the appropriate operational restriction, which is consistent in limitation and time to the existing LCO 3.0.3. Therefore, the proposed presentation and associated TS actions for a drywell bypass

leakage rate beyond its limit will result in establishing and maintaining the reactor in a cold shutdown / all-rods-in condition until the leakage is corrected, resulting in increased safety to the allowances of the existing TS action.

3. The details relating to drywell design in TS 3/4.6.2.2 are proposed to be relocated to the TS Bases and the UFSAR.

   Reference to "...acceptable $A/\sqrt{k}$ design value of 0.90 ft^2..." is already contained in the TS Bases and the UFSAR as design information and is controlled by 10 CFR 50.59. Therefore, this is an administrative change consistent with the guidance of NUREG-1434 (Ref. 3).

4. Details of the methods for performing the drywell bypass leakage surveillance in TS 4.6.2.2 are proposed to be relocated to the UFSAR.

   The proposed Technical Specification 4.6.2.1.d. (i.e., verify bypass leakage is less than or equal to 10% of the bypass leakage limit) ensures that drywell safety function is maintained. Therefore, relocation of surveillance details is an administrative change consistent with the guidance of NUREG-1434 (Ref. 3).

5. TS 4.6.2.2.c is proposed to be deleted. TS 4.6.2.2.c presently prohibits use of the surveillance interval extension of 25% which would otherwise be allowed by TS 4.0.2.

   The current restriction is unnecessary since the regulations do not require this testing on a specific frequency. The restriction also defeats the purpose of the generic allowance for interval extensions which is to facilitate the scheduling of surveillance activities to a period when plant conditions are suitable for conducting the required surveillance. This proposed change is consistent with currently approved technical specifications for both Perry Nuclear Power Plant and Clinton Power Station, two other BWR/6 stations which feature the Mark III containment.

6. The time interval between performances of the drywell bypass leakage test is proposed to be increased from 18 months to 10 years with an increased testing frequency required if performance degrades. Specifically, the Technical Specifications would be changed to read:

   4.6.2.1 DRYWELL INTEGRITY shall be demonstrated:

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   d. By verifying drywell bypass leakage is less than or equal to 10% of the bypass leakage limit at least once per 10 years. If any drywell bypass leakage rate test fails to meet the specified limit, the test frequency shall be increased to once every 36 months, if the

subsequent consecutive test meets the limit, then the above ten year test schedule may be resumed. If two consecutive tests fail to meet the limit, then a test shall be performed at least once every 18 months until two consecutive tests meet the limit, at which time the above ten year test schedule may be resumed. (end)

a. Surveillances for drywell bypass leakage were established to ensure that the pressure-suppression containment will be capable of performing its safety function when subjected to accident conditions. Surveillance criteria and schedules were developed without any previous operating experience for this containment design. GGNS was the first domestic application of a Mark III containment. As such, drywell surveillances were developed basically using engineering judgment only since no Mark III operating experience existed. The assortment of drywell surveillances and conservative acceptance criteria constituted operating restrictions which were imposed because of the lack of operating experience.

Surveillance activities presently in effect to ensure drywell safety function include drywell penetration configuration surveillance (TS 4.6.2.1.a), the drywell structural integrity inspection (TS 4.6.2.2); the drywell bypass leakage rate test (TS 4.6.2.2); multiple drywell airlock tests including airlock volume leakage rate testing, airlock door seal leak rate testing, airlock door seal instrumentation calibration and functional checks, and airlock door interlock mechanism functional verification (TS 4.6.2.3); monitoring drywell temperature (TS 4.6.2.6); monitoring drywell differential pressure relative to the containment (TS 4.6.2.5); monitoring suppression pool temperature and level (TS 4.6.3.1); and drywell vent and purge operational configuration (TS 4.6.2.7).

The periodic surveillance for drywell bypass leakage was specified to be performed at least once per 18 months to coincide with refueling outages. The surveillance was to be performed more frequently if the drywell leakage failed to meet acceptance criteria.

Surveillance requirements developed previously for new designs were established in order to conservatively satisfy regulatory practices until reliable performance of the design was established. In addition, drywell bypass leakage surveillance program requirements were developed with correlations to Appendix J requirements for primary containment with increased conservatisms. The added conservatisms were excessive because the design basis allowable leakage for the drywell (35,000 scfm) is much greater than that for the primary containment (7.5 scfm) These elements combine to cause exhaustive and undue surveillance

efforts for equipment and structures which are generally passive in performing their safety function.

b. Drywell Bypass Leakage Surveillance History Experience

Reliability of drywell integrity (and therefore safety function) has been displayed by multiple bypass leakage tests since construction. Surveillances since GGNS construction have resulted in consistent, acceptable values. A total of nine (9) drywell bypass leakage tests have been completed successfully spanning a period in excess of eleven (11) years, with nearly eight (8) of those years in commercial operation. Results of GGNS drywell bypass leakage surveillances are included in Table 1. The surveillance history for drywell bypass leakage clearly indicates high reliability and integrity of the drywell.

TABLE 1

GGNS DRYWELL BYPASS LEAKAGE SURVEILLANCES

TEST DATE	LEAK-RATE	RATIO OF DESIGN LIMIT	CALCULATED $A / \sqrt{k}$
01/82	0611 scfm	1.75%	0.016 ft^2
03/83*	1621 scfm	4.63%	0.042 ft^2
06/84	2599 scfm	7.43%	0.067 ft^2
11/85	2315 scfm	6.61%	0.060 ft^2
11/86 (RFO1)	1568 scfm	4.48%	0.040 ft^2
12/87 (RFO2)	1500 scfm	4.29%	0.039 ft^2
04/89 (RFO3)	1631 scfm	4.66%	0.042 ft^2
11/90 (RFO4)	1591 scfm	4.55%	0.041 ft^2
05/92 (RFO5)	0618 scfm	1.77%	0.016 ft^2

* NOTE: Initial test failed due to open drywell penetrations.

c. Applicability of Performance-Based Approach

Performance-based testing permits one to achieve a desired system/component performance goal in a manner which may be more effective than regulatory-driven approaches of the past. It introduces program flexibility that may be necessary to optimize other performance

objectives as well. A performance-based approach is being proposed for the GGNS drywell bypass leakage test program.

Physical bypass leakage tests have confirmed numerous times that drywell bypass leakage does not exceed the design basis limit nor approach the more conservative TS acceptable limit specified by the surveillance requirements. Test data indicates reliability of the drywell structure and its isolation components.

The overall goal of the drywell bypass leakage test is to ensure that leakage from the drywell to containment will be within acceptable limits should the drywell become pressurized under postulated accident conditions. Overall performance goals for such a test may therefore include acceptance criteria for the leakage rate and a high level of confidence that the leakage will be within this limit when challenged. GGNS currently has acceptance criteria specified in the Technical Specifications for drywell bypass leakage. No changes to these criteria are proposed. GGNS does propose an extension to the test interval, which could hypothetically impact the probability that the bypass leakage is in excess of this limit when challenged at some point between tests. Consideration of the risk impact of the proposed changes suggests that a program limiting the drywell leakage probability to less than 1E-2 per year would effectively eliminate accident sequences involving drywell bypass leakage as significant contributors to overall plant risk. While strict numerical adherence to a probability criterion is not proposed, GGNS does propose a testing program which ensures that the probability of failure is acceptably small.

The proposed changes consider a variety of factors important to an effective performance-based test program:

- The program recognizes that past performance is an important means of identifying and correcting performance problems. In over seven years of operating history, GGNS has not exceeded the very conservatively established drywell bypass leakage limits. Furthermore, no adverse trends in drywell bypass testing have been observed.

- The risk impact of postulated drywell bypass leakage is small. This is due to: (1) the low frequency of events which would challenge drywell integrity; (2) the high probability that the drywell will perform its intended function; (3) the existence of mitigation systems to prevent containment overpressurization in case that drywell bypass leakage exceeds the design limit; and (4) the relatively small resultant source term.

- Plant administrative and maintenance programs correct performance problems in a timely manner.

- The drywell is essentially a passive barrier. As a result, the proposed test program, which is based on performance criteria, provides assurance that the overall performance goals will be met. Performance problems will be addressed and the testing schedule adjusted if necessary to ensure ongoing acceptable performance.

d. Risk Impact of Proposed Changes

The purpose of the drywell leak testing program is to ensure that leakage from the drywell to the containment is within the design allowable limits in case the drywell's safety function is challenged. Although the change does not increase the probability of development of a bypass leakage path, the proposed change does increase the probability that drywell leakage paths will go undetected between tests. The impact is to potentially increase the probability of containment failure due to excessive drywell leakage. This could result in a higher post-accident release from containment. The proposed changes do not introduce any new accident scenario, do not affect other accident mitigation functions, nor do they contribute to the probability of the initiating accident. The GGNS Individual Plant Examination (IPE) (Ref. 4) conducted per NRC Generic Letter 88-20 was used to evaluate these potential impacts of the proposed Technical Specification changes.

The GGNS IPE considered overpressure failure of primary containment as part of the containment performance assessment. Containment overpressure failure can occur with or without excessive drywell leakage in a severe accident. This is due to physical phenomena associated with potentially extreme environmental conditions inside containment following a severe accident. However, the calculated frequency of such extreme conditions is very small. The proposed changes would not impact the phenomena causing primary containment overpressure failure and therefore would not contribute to these limiting accident scenarios.

A less challenging accident would be a LOCA with successful operation of the engineered safety feature systems, thereby maintaining the reactor core intact. Excessive drywell leakage could result in overpressurization of the containment and the release of radionuclides into the containment atmosphere. In this case, the radiological source term is much smaller than in the severe accident sequences considered in the GGNS IPE. Should the drywell leak excessively and pressurize containment, the containment spray system would automatically actuate.

Therefore, an overpressure failure of containment would require three conditions: (1) a LOCA initiating event; (2) excessive pre-existing leakage of the drywell; and (3) failure of the containment spray system. The GGNS IPE model can be used to estimate this sequence of events.

The drywell leakage probability can be estimated from the GGNS IPE analysis of containment. The drywell structure itself is a passive barrier, not subject to extreme environments under normal operation conditions. The drywell also contains penetrations with active components. Thus, the failure mode most likely to occur for the drywell would be excessive leakage through the active penetrations. The GGNS IPE did not explicitly examine these drywell penetrations. However, the study did examine similar penetrations in the primary containment as a possible means for containment isolation failure. The probability of containment isolation failure was determined to be less than 1E-3 per year given a core damage accident. A separate analysis has indicated that even if the test interval for primary containment isolation penetrations was increased to ten years (as is proposed for the drywell), the isolation failure probability would still be less than 1E-3 per year.

In order to analyze the impact of this proposal, the probability of excessive drywell bypass leakage was very conservatively assumed to be 1E-2 per year. A small LOCA initiator has an assumed frequency of occurrence of 1E-3 per year in the GGNS IPE. The containment spray system was modeled in the GGNS IPE and has a calculated failure probability to function on demand of approximately 1E-3 per year for a LOCA initiator.

The resultant frequency for an overpressure failure of containment due to excessive drywell leakage is conservatively estimated to be less than 1E-7 per year. This is a very low frequency event, and on the order of the low frequency severe accident events considered in the GGNS IPE. Since the resulting potential release would be much smaller than in a severe accident sequence of comparable frequency, it is clearly bounded by the GGNS IPE analysis results. This sequence would not increase overall plant risk. Therefore, the proposed changes do not have any significant risk impact.

e. Cost of Surveillances

The existing TS 4.6.2.2 surveillance frequency causes excessive surveillance efforts for the drywell, especially when considering the surveillance history. Previous drywell testing has demonstrated the drywell as being reliable and capable of performing its safety function.

Manpower and equipment necessary to surveil to the present requirements of TS 4.6.2.2 costs approximately $72K for staff and test equipment and $500K for replacement power since the surveillance requires a plant outage. A savings of $9.7M has been estimated for the remaining life of the plant with the proposed surveillance frequency for TS 4.6.2.2. In addition, radiation exposure to personnel will be reduced as a result of these changes.

7. The TS LCO, actions, and surveillances for the drywell airlock (TS 3/4.6.2.3) are proposed to be made consistent with NUREG-1434 (Ref. 3) with the exception of some plant specific proposed changes discussed in item 8.

   a. The details comprising operability of the airlock currently in the LCO are proposed to be relocated into the TS Bases and the UFSAR. Airlock interlock operability requirements are explicitly required in surveillances for airlock operability. The operability of this interlock ensures that when the airlock is being used for normal transit (entry and exit) through the drywell, then at least one airlock door shall be closed. The requirement for both doors to normally remain closed is included in the TS Bases. Should only one airlock door remain closed, the safety function of the drywell and its airlocks still provide a sufficiently leak tight barrier for postulated events.

      The BWR/6 drywell airlock is typically tested similar to primary containment airlocks. However, the drywell airlock is not a direct leakage path from the primary containment and therefore Appendix J test requirements do not apply. Specifically, the peak containment pressure (P_a) is the required test pressure for containment penetrations including the containment airlock; however, the drywell airlock will not be exposed to this same pressure differential. The appropriate test pressure, as reflected in other licensed BWR/6 technical specifications, is the differential pressure at which the first suppression pool blowdown vents clear (i.e., the maximum sustainable post-accident differential pressure).

   b. The revised presentation of actions does not propose to explicitly detail options to "restore . . . to OPERABLE status." This action is an option implied in all TS actions. Omitting this action statement is purely editorial.

   c. Proposed ACTION b. is to be added to the Technical Specifications to address inoperable airlock interlock mechanisms. Provided that one operable airlock door in each airlock can be maintained closed, the assumptions of accident analyses are maintained and operation should

be allowed to continue. This closed operable door is also required to be locked to assure it remains closed. In the event drywell access is desired, it is proposed to be allowed under strict administrative control (i.e., proposed ACTION b, required action Note 2). To provide a level of assurance equivalent to the mechanical interlock that at least one operable door will remain closed at all times during entry and exit, the proposed change requires an individual dedicated to ensure that two doors are not open simultaneously wiithout being the airlock being manned and one door is re-locked prior to leaving.

d. Current ACTION c. and surveillance 4.6.2.3.d.1 are proposed to be relocated. The airlock inflatable seal pressure instrumentation channels and associated alarm do not necessarily relate directly to airlock operability. In general, the BWR Standard Technical Specifications in NUREG-1434 (Ref. 3) do not specify indication-only or alarm-only equipment to be operable to support operability of a system or component. Control of the availability of, and necessary compensatory activities if not available, for indications, monitoring instruments, and alarms are addressed by plant operational procedures and policies. Therefore, relocation of the actions and surveillances for the airlock inflatable seal pressure instrumentation channels and associated alarms is an administrative change consistent with the guidance of NUREG-1434 (Ref. 3).

e. Proposed LCO 3.6.2.3 Actions Note is added to the Technical Specifications to allow entry through closed or locked airlock door(s) for the purpose of making repairs. If the outer door is inoperable, then it may be easily accessed for repair. If the inner door is the one that is inoperable, however, then it is necessary to allow entry through the operable outer door, which means there is a short time during which the drywell boundary is not intact (during access through the outer door).

The allowance is proposed to have strict administrative controls which are detailed in the proposed TS Bases. A dedicated individual (i.e., someone not involved with any repair or other maintenance effort) will be assigned to ensure: (1) the door(s) are opened only for the period of time required to gain entry into or exit from the airlock, and (2) any operable door is re-locked prior to departure of the dedicated individual.

Repairs are directed towards reestablishing two operable doors in the airlock. Two operable doors closed is clearly the most desirable plant condition for airlocks. The existing actions, in some circumstances, allow indefinite operation with only one operable door locked closed. Two operable doors closed is also clearly an improvement on safety over one

operable door locked closed. By not allowing access to make repairs, the existing TS actions could result in the inability of the plant to establish and maintain this highest level of safety possible (two operable doors closed) without a forced plant shutdown.

Therefore, allowing entry and exit, while temporarily allowing loss of drywell integrity, is proposed based on the expected result of restoring two operable doors to the airlock. Restricting this access to make repairs to an inoperable door or airlock ensures this allowance applies towards meeting this goal. This change is acceptable considering the low probability of an event which could pressurize the drywell during the short time period compared to the increased safety attained by completing repairs such that two operable doors can be closed.

f. Proposed Action 3.6.2.3 a Note 2 is added to the Technical Specifications to allow entry through a closed and/or locked airlock door (for reasons other than repairs) for a limited period of time (i.e., 7 days). Although one operable airlock door locked closed is sufficient to maintain drywell integrity and allow continued operation, entry and exit during low power operation is necessary to perform required surveillances, maintenance and inspections such as reactor coolant chemistry sampling, reactor water cleanup system operations, refueling preparations, preventative maintenance, etc. Should an airlock door become inoperable and access not be permitted, the unit would be forced to shut down.

The allowance is proposed to have strict administrative controls which are detailed in the proposed TS Bases. A dedicated individual (i.e., someone not involved with any repair or other maintenance effort) will be assigned to ensure: (1) the airlock door is opened only for the period of time required to gain entry into or exit from the airlock, and (2) the operable door is re-locked prior to departure of the dedicated individual.

Therefore, allowing the operable door to be opened (temporarily allowing loss of drywell integrity) for brief moments during a 7 day period is judged to be an acceptable exchange in risk; the risk of an event during the brief period of operable door opening for access (which is limited to a window of 7 days), versus the risk associated with the transient of the plant shutdown that would result from being prohibited to perfrom required activities within the drywell. In addition to this provision being presented in the NUREG-1434 (Ref. 3), it has been previously approved in the license for River Bend Nuclear Station, another BWR/6.

g. The reference to Special Test Exception 3.10.1 in TS 3.6.2.3 is proposed to be deleted.

The existing reference to "See Special Test Exception 3.10.1" serves no functional purpose and therefore its removal is purely an administrative difference in presentation consistent with the guidance of NUREG-1434, Revision 0.

h. The note "The provisions of Specification 4.0.2 are not applicable" is proposed to be deleted. The BWR/6 drywell airlock is typically tested similar to primary containment airlocks. However, the drywell airlock is not a direct leakage path from primary containment and therefore Appendix J test requirements do not apply. Specifically, the test frequencies are not dictated by the Appendix J regulation; therefore, the normal allowance of TS 4.0.2 can be applied. Allowing application of this specification is currently licensed in other BWR/6 technical specifications.

i. The of surveillance 4.6.2.3.b.1 is proposed to be changed from 6 months to 18 months. The BWR/6 drywell airlock is typically tested similar to primary containment airlocks. However, the drywell airlock is not a direct leakage path from primary containment and therefore Appendix J test requirements do not apply. Furthermore, its use is limited during operation due to radiation and temperature in the BWR/6 drywell. Since sufficient confidence in the door's sealing capability is assured considering past performance, and the airlock door usage is very low throughout an operating cycle, it is justified to allow performance of this test at refueling-outage intervals.

j. Surveillance 4.6.2.3.b.2 is proposed to be deleted. Any time the operability of a system or component has been affected by repair, maintenance or replacement of a component, post-maintenance testing is required to demonstrate operability of the system or component. Therefore, the explicit post-maintenance surveillance requirement is proposed to be deleted.

k. It is proposed that the drywell airlock door interlock operability surveillance not be required to be performed unless the airlock doors are to be opened for a drywell entry. Without this exception to the normal requirement for performing this test, the airlock doors would be required to be opened solely to perform this interlock test. The interlock feature is only useful when the airlock is utilized for entry.

8. The surveillances pertaining to airlock seal leakage and operability (TS

4.6.2.3.a, 4.6.2.3.d.2, 4.6.2.3.d.3) are proposed to be relocated to the UFSAR.

The surveillance program for the drywell airlock includes multiple tests including airlock volume leak rate testing, airlock door seal leak rate testing, airlock door seal instrumentation functional check, and airlock door interlock mechanism functional verification which also ensures latching mechanism function. Specific requirements for the battery of surveillances are described below. In addition, leakage past one airlock door is included in the measured drywell bypass leakage rate as part of the TS 4.6.2.2 surveillance. This is due to the TS 4.6.2.2 requirement to have one door open during the drywell bypass leakage rate test such that each drywell airlock door be tested as part of the drywell bypass leakage test at least every other drywell bypass leakage test.

While the plant is in Mode 1, 2, or 3, airlock door seals must be surveilled for leak rate within 72 hours after each closing or every 72 hours if the airlock is being used for multiple entries in accordance with TS 4.6.2.3.a.

The drywell airlock barrel presently is required to be surveilled for overall leakage each time the plant enters cold shutdown unless the surveillance has been performed within the previous six (6) months. The surveillance is also required to be performed as a post-maintenance test following any maintenance that has been performed on the airlock that could affect the airlock sealing capability. These requirements are currently specified by TS 4.6.2.3.b.

The latching and interlock mechanisms are surveilled at least once per 18 months in accordance with TS 4.6.2.3.c to verify that both doors in the airlock can not be open simultaneously.

Each drywell airlock door's inflatable seal system must be verified operable at least once per 18 months by performing a channel functional test and channel calibration of the inflatable seal pressure instrumentation channels per TS 4.6.2.3.d.1; each door's inflatable seal system compressed air supply accumulator (i.e., air flask) must be verified at least once per 7 days to have sufficient pressure per TS 4.6.2.3.d.2; and perform a 48 hour leakage test on each seal system air supply system at least once every 18 months per TS 4.6.2.3.d.3.

Justification

Surveillance requirements for the airlock barrel leakage test and door seal leakage (and seal support subsystems) tests basically duplicate the purpose and performance of the drywell bypass leakage surveillance required by TS 4.6.2.2. Existing surveillance requirements combine to cause duplicative and

exhaustive surveillance efforts for the drywell airlock system, especially when considering that these surveillance efforts do not provide significant additional assurance of drywell safety function.

Leakage rate results from the drywell airlock barrel and door seal tests are not added to the leakage rate results from the drywell bypass leakage test. Instead, leakage past drywell airlock barrel penetrations and doors contributes directly to the measured bypass leakage from the drywell to primary containment while performing TS 4.6.2.2. Furthermore, leakage past the drywell airlock barrel and drywell airlock door seals during the drywell bypass leakage surveillance is compounded by the TS 4.6.2.2 requirement to have one drywell airlock door open. This configuration increases the leakage rate through the airlock. Additional air flow restriction exists for potential leakage paths when both doors are closed. The measured leakage rate during the TS 4.6.2.2 surveillance with one airlock door open is greater than would be expected in case of a drywell limiting fault small break LOCA since both airlock doors would be closed with almost certain probability. Hence, TS 4.6.2.2 ensures with added conservatism that the drywell airlock will promote drywell integrity (and safety function in case of a LOCA) by performing the surveillance with one airlock door open.

Drywell airlock procurement specification limits drywell airlock leakage to 1.7 scfm at 30 psid with its components in working order. Without considering the additional conservatism of the higher differential pressure (i.e., 30 psid vs. 3 psid) for the procurement specification leakage limit, this is less than 0.05% of the surveillance acceptable leakage of 3,500 scfm at 3 psid per TS 4.6.2.2. The TS 3.6.2.3 leakage criterion and test pressure are based on this procurement specification, but the TS acceptable leakage rate and test pressure are not appropriate for design basis limits of drywell bypass leakage.

The limiting case for drywell bypass leakage is based on total leakage through all drywell paths other than the suppression pool vents. Total drywell bypass leakage from all paths should not exceed the acceptable limit of drywell bypass leakage. Therefore, the extremely conservative drywell airlock leakage requirements should not be used to single out leakage paths for total drywell bypass leakage criteria. Correlations for drywell airlock leakage can be made from 10 CFR 50 Appendix J requirements for primary containment, but Appendix J requirements for primary containment are not applicable to drywell design basis limits. The total bypass leakage through the drywell airlock and all other drywell penetrations is well below the design basis allowable drywell bypass leakage limit.

In order to assess the potential impact to the drywell bypass leakage rate in case of failed drywell airlock door seals, an engineering review was performed

to predict leakage past the drywell airlock doors seals (Refs. 5, 6). It was determined that leakage through the drywell airlock in case both seals failed on each door was 3,100 scfm with both doors closed. A worst case was postulated with one door open and both seals failed on the closed door and resulted in a leakage rate of 5,000 scfm. These leak rates were based cn a differential pressure of 3 psi.

Evaluation of bypass leakage values for complete failure of drywell airlock door seals considered the following case. The sum of the allowable drywell bypass leakage per TS 4.6.2.2 (3,500 scfm) and the more severe case postulated above results in a drywell bypass leakage rate of 8,500 scfm. This is less than 25% of the drywell design basis allowable leakage limit of 35,000 scfm. Thus, drywell airlock door seals are not vital to maintain the design allowable drywell bypass leakage rate.

Surveillance results since commercial operation have been less than the TS 4.6.2.2 acceptable value of 3,500 scfm, therefore the 8,500 scfm leakage rate is an upper limit for this failure mode. Thus, leakage through the drywell airlock in case one drywell airlock door is open and the other door is closed but its seals have failed does not exceed the design basis limit. This supports the proposal to delete the drywell airlock door inflatable seal components and requirements from the TS LCOs and surveillance requirements. GGNS considers all drywell airlock door seals and their attendant instrumentation and support subsystems LCO and surveillance requirements to be non-vital. Therefore, the applicable portions of TS 3/4.6.2.3 should be relocated to the UFSAR.

E. SIGNIFICANT HAZARDS CONSIDERATION

Entergy Operations, Inc. proposes to change the current Grand Gulf Nuclear Station (GGNS) Technical Specifications (TS) to (a) revise the frequency and compensatory actions for surveilling drywell bypass leakage and (b) delete a portion of the limiting condition for operation and surveillance requirements for the drywell airlock system. The specific proposed changes are:

1. TS 1.10, definition for DRYWELL INTEGRITY, is proposed to be changed to reflect the appropriate TS references.

2. The drywell leakage rate requirements of LCO 3.6.2.2 are proposed to be relocated as a supporting surveillance for TS 3/4.6.2.1(DRYWELL INTEGRITY).

3. The details relating to drywell design in TS 3/4.6.2.2 are proposed to be relocated to the TS Bases and the UFSAR.

4. Details of the methods for performing the drywell bypass surveillance in TS 4.6.2.2 are proposed to be relocated to the UFSAR.

5. TS 4.6.2.2.c is proposed to be deleted. TS 4.6.2.2.c presently prevents use of the surveillance interval extension of 25% which would otherwise be allowed by TS 4.0.2.

6. The time interval for performances of the drywell bypass leakage test is proposed to be increased from 18 months to 10 years with increased frequency of testing required if the drywell integrity degrades as indicated by failed surveillances.

7. The TS LCO, actions, and surveillances for the drywell airlock (TS 3/4.6.2.3) are proposed to be made consistent with NUREG-1434 (Ref. 3) with the exception of some plant specific proposed changes covered in the Item 8 below.

8. The surveillances pertaining to airlock seal leakage and operability (TS 4.6.2.3a, 4.6.2.3.d.2, 4.6.2.3.d.3) are proposed to be relocated to the UFSAR .

The Commission has provided standards for determining whether a no significant hazards consideration exists as stated in 10 CFR 50.92(c). The proposed changes involve the withdrawal of operating restrictions previously imposed because acceptable operation of the Mark III containment design had not been demonstrated at the time of licensing. As published in the Federal Register regarding no significant

hazards consideration criteria, granting a relief upon demonstration of acceptable operation from an operating restriction that was imposed because acceptable operation had not yet been demonstrated does not involve a significant hazards consideration (Ref. 48 FR 14870). Furthermore, a proposed amendment to an operating license involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment 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.

Entergy Operations, Inc. has evaluated the no significant hazards consideration in its request for this license amendment, even though the above-mentioned criterion is satisfied by this proposal. In accordance with 10 CFR 50.91(a), Entergy Operations, Inc. is providing the analysis of the proposed amendment against the three standards in 10 CFR 50.92(c). A description of the no significant hazards consideration determination follows:

I. ***The proposed change does not significantly increase the probability or consequences of an accident previously evaluated.***

1. The changes to Technical Specification 1.10 are purely administrative since the intent is to make the numbering consistent with the other proposed Technical Specifications. Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. The relocation of drywell leakage rate requirements of LCO 3.6.2.2 as a supporting surveillance for TS 3/4.6.2.1 (DRYWELL INTEGRITY) is only an administrative presentation change consistent with the guidance of NUREG-1434, Standard Technical Specifications, General Electric Plants, BWR/6 (Ref. 3). Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

3. The proposed change relocates certain details from the GGNS Technical Specifications (TS) to the TS Bases, UFSAR or procedures. The TS Bases, UFSAR and procedures containing the relocated information will be maintained in accordance with 10 CFR 50.59 and are subject to the change control provisions in the Administrative Controls section of Technical Specifications. Since any changes to the TS Bases, UFSAR or procedures will be evaluated per the requirements of 10 CFR 50.59, no increase (significant or insignificant) in the probability or consequences of an accident previously evaluated will be allowed. Therefore, this change does

not involve a significant increase in the probability or consequences of an accident previously evaluated.

4. The proposed change relocates certain details from GGNS TS to the TS Bases, UFSAR or procedures. The TS Bases, UFSAR and procedures containing the relocated information will be maintained in accordance with 10 CFR 50.59 and are subject to the change control provisions in the Administrative Controls section of TS. Since any changes to the TS Bases, UFSAR or procedures will be evaluated per the requirements of 10 CFR 50.59, no increase (significant or insignificant) in the probability or consequences of an accident previously evaluated will be allowed. Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

5. This change would delete the restriction which prevents use of the generic surveillance extension allowance for drywell bypass leakage testing. Drywell bypass leakage is not considered as the initiator for any previously evaluated accidents and, therefore, revising the surveillance frequency will not significantly increase the probability of any previously evaluated accident. Further, since the change maintains testing to verify the analyzed bypass leakage is not exceeded following an accident and does not result in any change in the response of the drywell to an accident, the change does not increase consequencesof any accident previously evaluated.

6. The proposed change deletes an administrative requirement to obtain NRC staff review and approval of the test schedule for drywell bypass leakage tests, if one test fails to meet the specified limit. Test schedules are not used as the initiator of any accident. Therefore, the probability of any accident previously evaluated is not increased. This proposed deletion does not change the requirement for limiting drywell bypass leakage, only the requirement to receive NRC staff review and approval of a schedule for doing the test. Therefore, the consequences of previously evaluated accidents are not increased.

   The proposed change in frequency for the drywell bypass leakage surveillance will continue to ensure that no paths exist through passive drywell boundary components to permit gross leakage from the drywell to the primary containment air space and result in bypassing the containment pressure-suppression feature beyond the design basis limit. The GGNS Mark III containment system satisfies General Design Criterion 16 of Appendix A to 10 CFR Part 50. Maximum drywell bypass leakage was determined previously by reviewing the full range of postulated primary system break sizes. The limiting case was a primary system small break LOCA and yielded a design allowable drywell bypass leakage rate limit of

35,000 scfm. The TS acceptable limit for the bypass leakage surveillance is 10% (i.e., 3,500 scfm) of this design basis value. The design basis drywell bypass leakage limit will not be affected by these proposed changes. Drywell integrity has been reliable at GGNS as indicated by past surveillances. The most recent bypass leakage value was approximately 1.8% of the design allowable leakage rate limit. GGNS is committed to maintaining programmatic and oversight controls that ensure that drywell bypass leakage remains a small fraction of the design allowable leakage limit. Therefore, the proposed changes do not significantly increase the consequences of an accident previously evaluated.

In order to analyze the impact of this proposal, the probability of excessive drywell bypass leakage is very conservatively assumed to be 1E-2 per year. A small LOCA initiator has a frequency of occurrence of 1E-3 per year in the GGNS IPE. The containment spray system was modeled in the GGNS IPE and has a failure probability to function on demand of approximately 1E-2 per year for a LOCA initiator given a core damage accident. The resultant frequency for an overpressure failure of containment due to excessive drywell leakage is conservatively estimated to be less than 1E-7 per year. This is a very low frequency event, and is on the order of the low frequency severe accident events considered in the GGNS IPE. Since the resulting potential release would be much smaller than in a severe accident sequence of comparable frequency, it is clearly bounded by the GGNS IPE analysis results. This sequence would not increase overall plant risk. Therefore, the proposed changes do not have any significant risk impact to accidents previously evaluated.

In the unlikely event of a design basis accident, primary containment should maintain its integrity as designed since the margin of safety is not reduced. Secondary containment integrity, in conjunction with the standby gas treatment system (SGTS) with redundant 100% capacity trains, would also mitigate the consequences of a design basis accident. SGTS is an engineered safety feature and is described in GGNS UFSAR Section 6.5.3.

7. The proposed change would allow continued operation with an inoperable drywell airlock door interlock mechanism. Having both drywell airlock doors open at the same time is not an initiator of any previously analyzed accident. Therefore, this change does not significantly increase the frequency of such accidents. The proposed change provides actions with appropriate compensatory measures to maintain a level of safety equivalent to compliance with the LCO. These actions do not result in airlock function different than assumed in any accident. Therefore, this change does not significantly increase the consequences of any previously analyzed accident.

The proposed change would allow the temporary opening of the remaining OPERABLE door for the purpose of making repairs to a drywell airlock door and for a limited period of time for purposes other than making repairs. This change does not affect the airlock design or function, and failure of an airlock is not identified as the initiator of any event. Therefore, this proposed change does not involve an increase in the probability of an accident previously evaluated. The change to allow the temporary opening of the one OPERABLE door for the purpose of making repairs results in a potential increase in consequences should an accident occur while it is open, but this increase is minimized through administrative controls and offset by the avoided potential consequences of a transient during shutdown. The potential for increased consequences resulting from the combination of: (1) the frequency of experiencing an inoperable airlock door such that the temporary opening of the OPERABLE door is required for access to repair; (2) the brief period that the OPERABLE door would be opened for access (typically on the order of one minute per entry/exit); (3) the proximity of an individual to accomplish closure; and (4) the occurrence of an event of sufficient magnitude to cause an immediate containment pressure increase such that an airlock door could not be closed; is not considered to be significant. Additionally, providing the ability to eliminate the potential consequences of: (1) extended operation with only one OPERABLE door closed (not allowing repairs to be made to restore the second door to OPERABLE status); and (2) the transient of plant shutdown to follow (due to inability to perform the overall airlock test); further minimizes the consequences. The allowance is proposed have strict administrative control. which will provide assurance that any associated potential consequences are minimized. Finally, the allowed time for both doors to be open is not expected to exceed the currently allowed time for required action when drywell integrity is determined to not be met. Therefore, these proposed changes do not involve a significant increase in the consequencesof an accident previously evaluated.

This change would delete the restriction which prevents use of the generic surveillance extension allowance for drywell airlock leakage testing. Drywell airlock leakage is not considered as the initiator for any previously evaluated accidents and, therefore, revising the surveillance frequency will not significantly increase the probability of any previously evaluated accident. Further, since the change maintains testing to verify that the analyzed airlock leakage is not exceeded following an accident and the proposed change does not alter the response of the drywell to an accident, the change does not increase the consequencesof any previously analyzed accident.

This change may increase the surveillance time interval of the drywell airlock leakage test. The current specification requires that it be conducted at each COLD SHUTDOWN if not conducted in the previous 6 months. If no shutdowns occur between refuelings, the time interval is the same as proposed. Therefore, there is no substantial change to the time interval. Further, there is no effect from a shutdown that would cause the airlock capabilities to be reduced. Therefore, this proposed change does not involve an increase in the probability of an accident previously evaluated, Further, since the change impacts only the frequency of verification and does not alter the response of the equipment to an accident, the change does not increase the consequencesof any previously analyzed accident.

This change would increase the surveillance time interval of the drywell airlock door interlock so that it is not required to be performed unless the drywell airlock doors are to be opened for drywell entry. The proposed change does not affect the drywell airlock design or function. Additionally, a failure of an airlock is not identified as the initiator of any event. Therefore, this proposed change does not involve an increase in the probability of an accident previously evaluated. Further, since the change impacts only the frequency of verification and does not result in any change in the response of the equipment to and accident, the change does not increase the consequencesof any previously analyzed accidents.

8. Calculations show that the maximum possible leakage possible with failed drywell airlock seals would not compromise the drywell safety function. The proposed change does not affect the drywell airlock design or function. Additionally, a failure of an airlock is not identified as the initiator of any event. The UFSAR containing the relocated information is maintained in accordance with 10 CFR 50.59 and is subject to the change control provisions in the Administrative Controls section of Technical Specifications. Since any changes to the UFSAR will be evaluated per the requirements of 10 CFR 50.59, no increase (significant or insignificant) in the probability or consequences of an accident previously evaluated will be allowed. Therefore, relocation of the airlock seal OPERABILITY requirements to the UFSAR does not involve a significant increase in the probability or consequences of an accident previously evaluated.

II. ***The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.***

1. The proposed changes to Technical Specification 1.10 are purely administrative since the intent is to make the numbering consistent with the other proposed Technical Specifications. Therefore, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

2. The proposed relocation of drywell leakage rate requirements of LCO 3.6.2.2 as a supporting surveillance for TS 3/4.6.2.1 (DRYWELL INTEGRITY) is only an administrative presentation change consistent with the guidance of NUREG-1434 (Ref. 3) Therefore, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. The proposed relocation of requirements does not involve a physical alteration of the plant (no new or different type of equipment will be installed) nor does it change the methods governing normal plant operation. The proposed change will not impose or eliminate any requirements. Adequate control of the information will be maintained in the UFSAR. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

4. The proposed relocation of requirements does not involve a physical alteration of the plant (no new or different type of equipment will be installed) nor does it change the methods governing normal plant operation. The proposed change will not impose or eliminate any requirements. Adequate control of the information will be maintained in the UFSAR. Thus, the change proposed does not create the possibility of a new or different kind of accident from any accident previously evaluated.

5. The proposed deletion does not alter equipment design, equipment capabilities, or operation of the plant. Further, since the change impacts only the test frequency for verification of leaktightness and does not result in any change in the response of the equipment to an accident, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

6. The proposed change modifies the surveillance frequency for drywell bypass leakage and deletes an administrative requirement to get NRC staff review and approval of the test schedule. The change does not alter equipment design or capabilities. The changes do not present any new or

additional failure mechanisms. The drywell is passive in nature and the surveillance will continue to verify that its integrity has not deteriorated. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

7. The proposed change does not alter equipment design or capabilities, but do allow operation of the plant with equipment that is incapable of performing its safety function. However, the change does include compensatory measures which will maintain a level of safety equivalent to the capabilities of the equipment. Drywell airlocks are designed and assumed to be used for entry and exit. Their operation does not interface with the reactor coolant system or any controls which could impact the reactor coolant pressure boundary or its support systems. The change impacts the test frequency for verification of airlock leaktightness and does not result in any change in the response of the equipment to an accident. Furthermore, brief periods of loss of drywell integrity are acknowledged in the existing license; TS 3.6.2.1 allows 1 hour to restore loss of drywell integrity prior to requiring a plant shutdown. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

8. The proposed relocation of requirements does not affect the drywell airlock design or function. Calculations show that the maximum leakage possible with failed drywell airlock seals would not compromise the drywell safety function. Additionally, failure of an airlock is not identified as the initiator of any event. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

III. ***The proposed change does not involve a significant reduction in a margin of safety.***

1. The changes to Technical Specification 1.10 are purely administrative since the intent is to make the numbering consistent with the other proposed Technical Specifications. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

2. The relocation of drywell leakage rate requirements of LCO 3.6.2.2 as a supporting surveillance for TS 3/4.6.2.1 (DRYWELL INTEGRITY) is only an administrative presentation change consistent with the guidance of NUREG-1434 (Ref. 3). Therefore, this change does not involve a significant reduction in a margin of safety.

3. The relocation of requirements will not reduce a margin of safety because it has no impact on any safety analysis assumptions. In addition, the requirements to be transposed from the TS to the TS Bases, UFSAR or procedures are the same as the existing Technical Specifications. Since any future changes to these requirements in the TS Bases, UFSAR or procedures will be evaluated per the requirements of 10 CFR 50.59, no reduction (significant or insignificant) in a margin of safety will be allowed. Also, since the proposed change is consistent with NUREG-1434 (Ref. 3) as approved by the NRC Staff, revising the TS to reflect the approved level of detail ensures no significant reduction in the margin of safety.

4. The relocation of requirements will not reduce a margin of safety because it has no impact on any safety analysis assumptions. In addition, the requirements to be transposed from the TS to the TS Bases, UFSAR or procedures are the same as the existing Technical Specifications. Since any future changes to these requirements in the TS Bases, UFSAR or procedures will be evaluated per the requirements of 10 CFR 50.59, no reduction (significant or insignificant) in a margin of safety will be allowed. Also, since the proposed change is consistent with NUREG-1434 (Ref. 3) as approved by the NRC Staff, revising the TS to reflect the approved level of detail ensures no significant reduction in the margin of safety.

5. The proposed deletion impacts only the test frequency to be used for verification of the drywell bypass leakage. The limits on the allowable leakage are not revised and must continue to be met. Therefore, the change does not involve a significant reduction in the margin of safety.

6. The proposed change modifies the surveillance frequency for drywell bypass leakage and deletes an administrative requirement to get NRC staff review and approval of the test schedule. Reliability of drywell integrity is evidenced by the measured leakage rate during past drywell bypass leakage surveillances. Appropriate design basis assumptions will be upheld, even when combined with the complementary bypass leakage surveillances as proposed. The surveillance acceptance leakage rate is 10% of the design allowable drywell bypass leakage limit of 35,000 scfm. Margins of safety would not be reduced unless leakage rates exceeded the design allowable drywell bypass leakage limit. Therefore, the proposed change does not reduce the margin of safety.

7. This change permits the use of dedicated personnel to provide compensatory actions in place of automatic equipment for a limited time. These administrative controls continue to provide an adequate drywell boundary should an accident occur. Therefore, the proposed change does

not involve a significant reduction in the margin of safety.

The design, function, and OPERABILITY requirements for the drywell airlock remains unchanged with this proposed revision. Drywell leak rate limits are unaffected. The proposed change to allow the temporary opening of the one OPERABLE door for the purpose of repairing an inoperable airlock door and for purposes other than repairing an inoperable airlock door (for a limited time), is not considered to be a significant reduction in the margin of safety. The combination of: (1) the frequency of experiencing an inoperable airlock door such that drywell entry is required for access to repair; (2) the brief period the OPERABLE door would be opened for access (typically on the order of one minute per entry/exit); (3) the proximity of a dedicated individual to accomplish closure; and (4) the occurrence of an event of sufficient magnitude to cause an immediate containment pressure increase such that an airlock door could not be closed; are not considered to be representative of a significant reduction in the margin of safety. Additionally, providing the ability to eliminate any reduction in safety resulting from the combination of: (1) extended operation with only one OPERABLE door closed (not allowing repairs to be made to restore the second door to OPERABLE status); and (2) the transient of plant shutdown to follow (due to inability to perform the overall airlock test); further minimizes any reduction in the margin of safety. The allowance is proposed have strict administrative control which will provide assurance that any associated safety reduction is further minimized. Finally, the allowed time for both airlock doors to be open is not expected to exceed the currently allowed time for required action when drywell integrity is determined to not be met. Therefore, the proposed changes do not reduce the margin of safety.

The proposed change affecting frequency of testing impacts only the verification of drywell airlock leakage. The limits on the allowable leakage are not revised and must continue to be met. The changes in testing frequency will not reduce the reliability of the drywell airlock hardware. The surveillances will continue to provide sufficient assurance of OPERABILITY. Therefore, the proposed changes do not reduce the margin of safety.

8. The proposed change does not adversely affect design or performance of the drywell or primary containment safety functions. Drywell integrity will continue to be surveilled by means of the proposed periodic drywell bypass leakage test, performance of the drywell airlock door latching and interlock mechanism surveillance, and performance of additional surveillances including drywell isolation valves. The combination of these surveillances will provide adequate assurance that drywell bypass leakage will not exceed the design basis limit. Evaluation of bypass leakage values for

complete failure of the drywell airlock door seals determined that the drywell airlock door seals are not required to maintain the design basis assumption for limited drywell bypass leakage. Therefore, the proposed change does not reduce a margin of safety.

D. REFERENCES

1. GGNS Technical Specifications and Bases, 6/25/93;

2. Grand Gulf Nuclear Station (GGNS) Updated Final Safety Analysis Report (UFSAR);

3. NUREG-1434, Standard Technical Specifications, General Electric Plants, BWR/6, September 1992;

4. GGNS Response to Generic Letter 88-20 Supplement 1,"Individual Plant Examination";

5. PMI-84/8392, "NPE Re-Evaluation of Drywell Personnel Air Lock Seals, Final Report", July 6, 1984;

6. Letter from MP&L's L.F. Dale to USNRC's H. R. Denton dated October 24, 1983, (AECM-83/0674);

7. GGNS Safety Evaluation Report (NUREG-0831) and its supplements; Examination";