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September 12, 2002

U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Document Control Desk

Subject: Technical Specification Bases Update to the NRC for Period Dated
September 12, 2002

Grand Gulf Nuclear Station
Docket No. 50-416
License No. NPF-29

GNRO-2002/00083

Ladies and Gentlemen:

Pursuant to Grand Gulf Nuclear Station (GGNS) Technical Specification 5.5.11, Entergy Operations, Inc. hereby submits an update of all changes made to GGNS Technical Specification Bases since the last submittal (GNRO-2002/00064 letter dated July 23, 2002 to the NRC from GGNS). This update is consistent with update frequency listed in 10CFR50.71(e).

This letter does not contain any commitments.

Should you have any questions, please contact James Owens at (601) 437-6219.

Yours truly,

A handwritten signature in black ink, appearing to be "CA" followed by a stylized flourish.

JEO/jeo
attachment:
cc:

GGNS Technical Specification Bases Revised Pages
(See Next Page)

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cc:

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U.S. Nuclear Regulatory Commission ATTN: Mr. E. W. Merschoff (w/2) 611 Ryan Plaza Drive, Suite 400 Arlington, TX 76011-4005	ALL LETTERS
U.S. Nuclear Regulatory Commission ATTN: Mr. David H. Jaffe, NRR/DLPM (w/2) ATTN: ADDRESSEE ONLY ATTN: Courier Delivery Only Mail Stop OWFN/7D-1 11555 Rockville Pike Rockville, MD 20852-2378	ALL LETTERS – COURIER DELIVERY (FEDEX, ETC.) ADDRESS ONLY - ****DO NOT USE FOR U.S. POSTAL SERVICE ADDRESS*****

ATTACHMENT to GNRO-2002/00083

GGNS Gulf Technical Specification Bases Revised Pages

dated

September 12, 2002

LDC#	BASES PAGES AFFECTED	TOPIC of CHANGE
02006	B 3.6-64, 65, and 65a; B 3.10-38, 39, 40, 41, 42, and 43	Implementation of Technical Specification Amendment 154 – Reactor Cavity Pool Draindown

BASES

SURVEILLANCE
REQUIREMENTS
(continued)

SR 3.6.2.4.2

The upper containment pool water temperature is regularly monitored to ensure that the required limit is satisfied. The 24 hour Frequency was developed based on operating experience related to upper containment pool temperature variations during the applicable MODES.

SR 3.6.2.4.3

Verifying the correct alignment for manual, power operated, and automatic valves in the SPMU System flow path provides assurance that the proper flow paths will exist for system operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position, since these valves are verified to be in the correct position prior to being locked, sealed, or secured. This SR does not require any testing or valve manipulation. Rather, it involves verification that those valves capable of potentially being mispositioned are in the correct position. This SR does not apply to valves that cannot be inadvertently misaligned, such as check valves.

The Frequency of 31 days is justified because the valves are operated under procedural control and because improper valve position would affect only a single subsystem. This Frequency has been shown to be acceptable through operating experience.

SR 3.6.2.4.4

The upper containment pool has two gates used to separate the pool into distinct sections to facilitate fuel transfer and maintenance during refueling operations and two additional gates in the separator pool weir wall extension, which, when installed, limit personnel exposure and ensure adequate water submergence of the separator when the separator is stored in the pool. The SPMU System dump line penetrations are located in the steam separator storage section of the pool. To provide the required SPMU System dump volume to the suppression pool, the gates must be removed (or placed in their stored position) to allow communication between the various pool sections. The Surveillance is modified by a Note that allows leaving

(continued)

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.6.2.4.4 (continued)

the gates installed if the Suppression Pool Low Level limit is increased to 18 ft 5 1/12 inches. (See Reference 3). The 31 day Frequency is appropriate because the gates are moved under procedural control and only the infrequent movement of these gates is required in MODES 1, 2, and 3.

The provision to allow gate installation in MODES 1, 2, and 3 results in isolating a portion of the SPMU System dump volume. This provision does not apply to the separator pool weir wall extension gates. These gates are not readily accessible with the upper containment pool at its required level. Supporting analyses have shown that increasing the minimum suppression pool level adequately compensates for water trapped by isolating the fuel storage and/or fuel transfer canal areas.

SR 3.6.2.4.5

This SR requires a verification that each SPMU subsystem automatic valve actuates to its correct position on receipt of an actual or simulated automatic initiation signal. This includes verification of the correct automatic positioning of the valves and of the operation of each interlock and timer. As noted, actual makeup to the suppression pool may be excluded. The LOGIC SYSTEM FUNCTIONAL TEST in SR 3.3.6.4.6 overlaps this SR to provide complete testing of the safety function. The 18 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown that these components usually pass the Surveillance when performed at the 18 month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

This SR is modified by a NOTE that excludes makeup to the suppression pool. Since all active components are testable, makeup to the suppression pool is not required.

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BASES (continued)

- REFERENCES
1. UFSAR, Section 6.2.
 2. UFSAR, Chapter 15.
 3. GNRO-2002/00011.
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B 3.10 SPECIAL OPERATIONS

B 3.10.9 Suppression Pool Makeup System

BASES

BACKGROUND Maintaining the SPMU inventory in the Upper Containment Pools will lead to delays in completing outage work in a timely manner, particularly with the advent of things like Noble Metal addition technology has led to the need for holding temperature and pressure at a point above the MODE 4 definition of Table 1.1-1.

The purpose of this Special Operations LCO is to allow the Upper Containment Pool to be drained below its normal level such that certain refueling activities can proceed prior to reaching MODE 4. These activities include installation of the gate between the refueling cavity and the upper containment (fuel storage pool) and completely draining the reactor cavity.

**APPLICABLE
SAFETY ANALYSES**

Supporting analyses and engineering calculations determined the required water inventory to ensure that the suppression pool makeup function is satisfied if the specified conditions of this Special Operations LCO are met. Supporting analyses differ from those for TS 3.6.2.4 in that a portion of the SPMU volume is assumed to have already been transferred to the suppression pool with the remainder available from the separator storage pool portion of the Upper Containment Pool. These analyses demonstrate that the containment spray function of RHR is not required following a design basis LOCA to protect the containment given the reduced temperature and pressure stipulated by the LCO. An empty reactor cavity creates a large hold-up volume that would significantly deplete the suppression pool inventory if containment spray operation were to occur. The analysis results demonstrate that the containment pressure increase following a DBA LOCA will not be sufficient to result in the auto-initiation of containment spray.

In addition to the design basis analyses, drywell bypass capability analyses (Reference 1) indicate that containment pressure could exceed the containment spray auto-actuation setpoint. Steam bypass leakage and the associated capability analyses are discussed in Reference 4. For the

(continued)

BASES

APPLICABLE
SAFETY ANALYSES
(continued)

most limiting large break bypass leakage capability analysis (Ref. 1), operator action to control reactor water level is credited in ensuring that sufficient inventory is available for containment spray operation.

The containment loads evaluation performed for this special operation including the elevated suppression pool levels demonstrates that at the decay time and reactor pressure specified by the LCO, the containment loads are bounded by those calculated for the DBA LOCA.

Specific analyses demonstrate containment temperature and pressure as well as radiological consequences are bounded by those following large and small break LOCAs at full power conditions. The applicable analyses supporting the LCO are contained in References 1, 2 and 3. During these events, the SPMU System is relied upon to dump the separator pool water to maintain drywell horizontal vent coverage and an adequate suppression pool heat sink volume to ensure that the primary containment internal pressure and temperature stay within design limits.

As described in LCO 3.0.7, compliance with this Special Operations LCO is optional, and therefore, no criteria of the NRC Policy Statement apply. Special Operations LCOs provide flexibility to perform certain operations by appropriately modifying requirements of other LCOs. A discussion of the criteria satisfied for the other LCOs is provided in their respective Bases.

LCO

As described in LCO 3.0.7, compliance with this Special Operations LCO is optional. Operation with the Upper Containment Pool levels below those specified in SR 3.6.2.4.1 can be achieved by exiting the condition where LCO 3.6.2.4 applies. Operation with elevated suppression pool levels is also optional as operation at levels above those specified in LCO 3.6.2.2 can be achieved by exiting the condition where the LCO applies.

Compliance with the Figure 3.10.9-1 level requirements ensure that there is sufficient overlap with the requirements of LCO 3.6.2.2 and 3.6.2.4 such that the volume in containment during the transition to a drained refueling

(continued)

BASES

LCO
(continued) cavity fulfills the containment water inventory requirements assumed in the analysis. Once the level of the weir wall separating the refueling cavity from the separator storage pool is reached, Figure 3.10.9-1 only applies to the separator pool. Supporting analyses assume that the weir wall gates are not installed.

Maintaining the fuel storage and transfer canal area pools ensures that water traps inside containment are minimized consistent with the supporting analysis.

The reactor subcritical time, suppression pool average temperature, and reactor steam dome pressure are assumptions of the supporting analyses.

Entry into MODE 4 operation does not require the use of this Special Operations LCO or its ACTIONS.

APPLICABILITY The MODE 3 requirements may only be modified for allowing early drain-down of the Upper Containment Pool while performing Noble Metal addition or during a reactor cool down for a refueling outage. The requirements of this LCO provide conservatism in the response of the unit to any event that may occur. Operations in all other MODES are unaffected by this LCO.

ACTIONS A Note has been provided to modify the ACTIONS related to drain-down of Upper Containment Pools-MODE 3. Section 1.3, Completion Times, specifies once a Condition has been entered, subsequent divisions, subsystems, components, or variables expressed in the Condition discovered to be inoperable or not within limits, will not result in separate entry into the Condition. Section 1.3 also specifies that Required Actions of the Condition continue to apply for each additional failure, with Completion Times based on initial entry into the Condition. However, the Required Actions for each requirement of the LCO not met provide appropriate compensatory measures for separate requirements that are not met. As such, a Note has been provided that allows separate entry for each requirement of the LCO.

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BASES

ACTIONS
(continued)

A.1

With the requirements of the LCO not met (e.g., Upper Containment Pool level not within limits), the draining of the Upper Containment Pool is to be suspended. Thereby, a worsening of the circumstances will be prevented.

A.2

If one or more of the requirements of this Special Operations LCO are not met, the immediate implementation of the Required Action commences activities, which will restore operation consistent with the Special Operations LCO. The Completion Time is intended to require that these Required Actions be implemented in a very short time and carried through in an expeditious manner.

B.1

Required Action A.2.2 is an alternative Required Action that can be taken instead of Required Action A.2.1 to restore compliance with the normal MODE 3 requirements, thereby exiting this Special Operations LCOs Applicability. The allowed Completion Time allows sufficient time to reestablish compliance with the appropriate Technical Specification.

B.2

If the requirements of this Special Operations LCO or the normal MODE 3 requirements cannot be met within the required Completion Time, the plant must be brought to a MODE in which the LCO does not apply. The allowed Completion Time is reasonable, based on operating experience, to reach the required plant conditions and is consistent with the time provided in LCO 3.0.3 for reaching MODE 4 from MODE 3.

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BASES (continued)

SURVEILLANCE
REQUIREMENTS

SR 3.10.9.1 and SR 3.10.9.2

Verification of the Suppression Pool temperature and Steam Dome pressure ensures that assumptions of the supporting analyses for this Special Operations LCO are continually met. Therefore, the plant response to an accident while in this Special Operations LCO will remain bounded by the Design Basis Loss of Coolant Accident.

The Frequency of 12 hours is based on engineering judgement and is considered adequate due to the unlikely event of unknowingly adding heat to the Suppression Pool or increasing Reactor pressure.

SR 3.10.9.3

Verification of the required Upper Containment Pool and Suppression Pool levels to be within limits ensures that the engineering assumptions for the calculations supporting this Special Operations LCO are continually met. These assumptions ensure sufficient inventory is available such that Drywell vent submergence and Suppression Pool heat sink requirements are met.

The Frequency of 12 hours is based on engineering judgement and is considered adequate in view of the large volume of water and the normal procedural controls on valve positions, which make significant unplanned level changes unlikely.

SR 3.10.9.4

Verification of the required Fuel Storage and Transfer Canal Pool levels to be within limits ensures that the engineering assumptions for the calculations supporting this Special Operations LCO are continually met. These assumptions ensure sufficient inventory is available such that Drywell vent submergence and Suppression Pool heat sink requirements are met.

The Frequency of 12 hours is based on engineering judgement and is considered adequate in view of the large volume of water and the normal procedural controls on valve positions, which make significant unplanned level changes unlikely.

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BASES (continued)

- REFERENCES
1. Calculation XC-Q1M10-01012, "MODE 3 Containment Analysis at Reduced Reactor Pressure."
 2. Calculation XC-Q1E30-01004, "Suppression Pool Makeup System - MODE 3."
 3. Calculation XC-Q1111-01011, "MODE 3 LOCA Dose Analysis."
 4. UFSAR 6.2.1.1.5.
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