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GNRO-2004/00058

October 18, 2004

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

Attention: Document Control Desk

Subject: Technical Specification Bases Update to the NRC for Period Dated October 18, 2004

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

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-2004/00036 letter dated May 24, 2004 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 Rita Jackson at (601) 437-2149.

Yours truly,

CAB/RRJ
attachment: GGNS Technical Specification Bases Revised Pages
cc: (See Next Page)

cc:

Hoeg	T. L.	(GGNS Senior Resident)	(w/a)
Levanway	D. E.	(Wise Carter)	(w/a)
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ATTACHMENT to GNRO-2004/00058

Grand Gulf Technical Specification Bases Revised Pages

dated

October 18, 2004

LDC#	BASES PAGES AFFECTED	TOPIC of CHANGE
03102	B 3.3-55; B 3.3-60; B3.3-61; B 3.6-66; B 3.6-67; B3.6-68; B 3.6-69; B 3.6-70; B 3.6-71; B 3.6-73; B 3.6-78a.	TS Bases changes (deletions) are made to reflect the TS requirements deleted by Amendment 166. Amendment 166 revises the Technical Specifications by eliminating the requirements associated with hydrogen recombiners and hydrogen monitors.

BASES

LCO
(continued)

13. Drywell Area Radiation (High Range)

Drywell area radiation (high range) is a Category I variable provided to monitor for the potential of significant radiation releases and to provide release assessment for use by operators in determining the need to invoke site emergency plans.

Two high range drywell area radiation signals are transmitted from separate radiation elements and are continuously recorded and displayed on two control room recorders. The recorders are the primary indication used by the operator during an accident. Therefore, the PAM Specification deals specifically with this portion of the instrument channel.

14, 15. Deleted

16. Penetration Flow Path, Primary Containment Isolation Valve (PCIV) Position

PCIV position is provided for verification of containment integrity. In the case of PCIV position, the important information is the status of the containment penetration

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.3.1.1 (continued)

Agreement criteria are determined by the plant staff based on a combination of the channel instrument uncertainties, including isolation, indication, and readability. If a channel is outside the criteria, it may be an indication that the sensor or the signal processing equipment has drifted outside its limit.

The Frequency of 31 days is based upon plant operating experience with regard to channel OPERABILITY and drift, which demonstrates that failure of more than one channel of a given function in any 31 day interval is rare. The CHANNEL CHECK supplements less formal, but more frequent, checks of channels during normal operational use of those displays associated with the required channels of this LCO.

SR 3.3.3.1.2 Deleted

SR 3.3.3.1.3

For all Functions a CHANNEL CALIBRATION is performed every 18 months, or approximately at every refueling. CHANNEL CALIBRATION is a complete check of the instrument loop including the sensor. The test verifies that the channel responds to the measured parameter with the necessary range and accuracy. The Frequency is based on operating experience and consistency with the typical industry refueling cycles.

For Functions 12 and 13 the CHANNEL CALIBRATION consists of an electronic calibration of the channel, not including the detector, for range decades above 10R/hr and a one point calibration check of the detector below 10R/hr with an installed or portable gamma source. The neutron detectors are excluded from the CHANNEL CALIBRATION because they cannot readily be adjusted. The detectors are fission

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.3.1.3 (continued)

chambers that are designed to have a relatively constant sensitivity over the range, and with an accuracy specified for a fixed useful life.

REFERENCES

1. Regulatory Guide 1.97, "Instrumentation for Light-Water Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an *Accident*," *Revision 2, December 1980*.

2. NRC Safety Evaluation Report, "Conformance to regulatory Guide 1.97, Revision 2, Grand Gulf Nuclear Station, Unit 1," dated January 12, 1987.

3. GNRO-93/00032, Grand Gulf Nuclear Station (GGNS) Plant Specific Design Evaluation for NEDO-31558, dated March 15, 1993.

4. UFSAR, Section 7.5.

B 3.6 CONTAINMENT SYSTEMS

B 3.6.3.1 Deleted

Pages B 3.6-66 through B 3.6-71 have been deleted.
(Next page is B 3.6-72)

BASES

BACKGROUND (continued)

When the hydrogen igniters are energized they heat up to a surface temperature ≥ 1700°F. At this temperature, they ignite the hydrogen gas that is present in the airspace in the vicinity of the igniter. The hydrogen igniters depend on the dispersed location of the igniters so that local pockets of hydrogen at increased concentrations would burn before reaching a hydrogen concentration significantly higher than the lower flammability limit.

APPLICABLE SAFETY ANALYSES

The hydrogen igniters cause hydrogen in containment to burn in a controlled manner as it accumulates following a degraded core accident (Ref. 3). Burning occurs at the lower flammability concentration, where the resulting temperatures and pressures are relatively benign. Without the system, hydrogen could build up to higher concentrations that could result in a violent reaction if ignited by a random ignition source after such a buildup.

The hydrogen igniters are not included for mitigation of a Design Basis Accident (DBA) because an amount of hydrogen equivalent to that generated from the reaction of 75% of the fuel cladding with water is far in excess of the hydrogen calculated for the limiting DBA loss of coolant accident (LOCA). The hydrogen igniters have been shown by probabilistic risk analysis to be a significant contributor to limiting the severity of accident sequences that are commonly found to dominate risk for units with Mark III containment.

The hydrogen igniters are considered to be risk significant in accordance with the NRC Policy Statement.

LCO

Two divisions of primary containment and drywell hydrogen igniters must be OPERABLE, each with more than 90% of the igniters OPERABLE (i.e., no more than 4 igniters inoperable).

This ensures operation of at least one igniter division, with adequate coverage of the primary containment and drywell, in the event of a worst case single active failure. This will ensure that the hydrogen concentration remains near 4.0 v/o.

(continued)

BASES

BACKGROUND (continued)

This ensures the blowdown from the drywell to the primary containment is complete. The drywell purge compressors force air from the primary containment into the drywell. Drywell pressure increases until the water level between the weir wall and the drywell is forced down to the first row of suppression pool vents forcing drywell atmosphere back into containment and mixing with containment atmosphere to dilute the hydrogen.

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