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GNRO-2007/00073

December 03, 2007

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

Attention: Document Control Desk

Subject: Technical Specification Bases Update to the NRC for Period Dated December 03, 2007

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

Dear Sir and Madam:

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-2007/00049 dated July 25, 2007 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 Michael Larson at (601) 437-6685.

Sincerely,

CAB/MJL
attachment: GGNS Technical Specification Bases
cc: (See Next Page)

cc:

NRC Senior Resident Inspector Grand Gulf Nuclear Station Port Gibson, MS 39150	
U.S. Nuclear Regulatory Commission ATTN: Dr. Bruce S. Mallett (w/2) 611 Ryan Plaza Drive, Suite 400 Arlington, TX 76011-4005	ALL LETTERS
U.S. Nuclear Regulatory Commission ATTN: Mr. **Bhalchandra Vaidya**, NRR/DORL (w/2) **ATTN: ADDRESSEE ONLY** ATTN: Courier Delivery Only Mail Stop OWFN/O-7D1A 11555 Rockville Pike Rockville, MD 20852-2378	ALL LETTERS – COURIER DELIVERY (FEDEX, ETC.) ADDRESS ONLY - ****DO NOT USE FOR U.S. POSTAL SERVICE ADDRESS***** NOT USED IF EIE USED

ATTACHMENT to GNRO-2007/00073

Grand Gulf Technical Specification Bases Revised Pages

LDC#	BASES PAGES AFFECTED	TOPIC of CHANGE
07037	B 3.6-17, B 3.6-17a, B 3.6-18, B 3.6-18a, B 3.6-25a	Implements Technical Specification Amendment 176
07045	B 3.3-26, B 3.3-27	Implements Technical Specification Amendment 177

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.3.1.1.7

LPRM gain settings are determined from the Core power distribution calculated by the Core Performance Monitoring system based on the local flux profiles measured by the Traversing Incore Probe (TIP) System. This establishes the relative local flux profile for appropriate representative input to the APRM System. The 2000 MWD/T (megawatt days/ton) Frequency is based on operating experience with LPRM sensitivity changes. For the purpose of calculating this surveillance frequency, the ton (T) unit of weight is expressed in terms of metric tons of uranium fuel residing in the reactor core.

SR 3.3.1.1.8 and SR 3.3.1.1.11

A CHANNEL FUNCTIONAL TEST is performed on each required channel to ensure that the entire channel will perform the intended function. Any setpoint adjustment shall be consistent with the assumptions of the current plant specific setpoint methodology. The 92 day Frequency of SR 3.3.1.1.8 is based on the reliability analysis of Reference 9.

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.

(continued)

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.3.1.1.9

The calibration of trip units provides a check of the actual trip setpoints. The channel must be declared inoperable if the trip setting is discovered to be less conservative than the Allowable Value specified in Table 3.3.1.1-1. If the trip setting is discovered to be less conservative than accounted for in the appropriate setpoint methodology, but is not beyond the Allowable Value, the channel performance is still within the requirements of the plant safety analysis. Under these conditions, the setpoint must be readjusted to be equal to or more conservative than accounted for in the appropriate setpoint methodology.

The Frequency of 92 days for SR 3.3.1.1.9 is based on the reliability analysis of Reference 9.

SR 3.3.1.1.10, SR 3.3.1.1.12 and SR 3.3.1.1.17

A CHANNEL CALIBRATION is a complete check of the instrument loop and the sensor. This test verifies the channel responds to the measured parameter within the necessary range and accuracy. CHANNEL CALIBRATION leaves the channel adjusted to account for instrument drifts between successive calibrations consistent with the plant specific setpoint methodology.

Note 1 states that neutron detectors are excluded from CHANNEL CALIBRATION because of the difficulty of simulating a meaningful signal. Changes in neutron detector sensitivity are compensated for by performing the 7 day calorimetric calibration (SR 3.3.1.1.2) and the 2000 MWD/T LPRM calibration against the TIPs (SR 3.3.1.1.7). A second Note is provided that requires the APRM and IRM SRs to be performed within 12 hours of entering MODE 2 from MODE 1. Testing of the MODE 2 APRM and IRM Functions cannot be performed in MODE 1 without utilizing jumpers, lifted leads or movable links. This Note allows entry into MODE 2 from MODE 1 if the associated Frequency is not met per SR 3.0.2. Twelve hours is based on operating experience and in consideration of providing a reasonable time in which to complete the SR.

(continued)

ACTIONS (continued)

operator at the controls of the valve, who is in continuous communication with the control room. In this way, the penetration can be rapidly isolated when a need for primary containment isolation is indicated.

A second Note has been added to provide clarification that, for the purpose of this LCO, separate Condition entry is allowed for each penetration flow path. This is acceptable, since the Required Actions for each Condition provide appropriate compensatory actions for each inoperable PCIV. Complying with the Required Actions may allow for continued operation, and subsequent inoperable PCIVs are governed by subsequent Condition entry and application of associated Required Actions.

The ACTIONS are modified by Notes 3 and 4. These Notes ensure appropriate remedial actions are taken, if necessary, if the affected system(s) are rendered inoperable by an inoperable PCIV (e.g., an Emergency Core Cooling System subsystem is inoperable due to a failed open test return valve, or when the primary containment leakage limits are exceeded). Pursuant to LCO 3.0.6, these ACTIONS are not required even when the associated LCO is not met. Therefore, Notes 3 and 4 are added to require the proper actions to be taken.

A.1 and A.2

With one or more penetration flow paths with one PCIV inoperable except for inoperability due to leakage not within a limit specified in an SR to this LCO, the affected penetration flow path must be isolated. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve, a blind flange, and a check valve with flow through the valve secured. This Action is modified by a Note which allows automatic relief valves with a relief setpoint of at least 1.5 times containment design pressure (i.e., 23 psig) to be used to isolate penetration flow paths without being de-activated provided one of the following criteria is met: 1) the relief valve is one-inch nominal size or less or 2) the flow path is into a closed system whose piping pressure

(continued)

BASES

ACTIONS

A.1 and A.2 (continued)

rating exceeds the containment design pressure rating. This preserves both the containment isolation function and the system overpressure protection function. The Note also avoids unnecessary safety system unavailability time and unnecessary occupational dose that would be associated with de-activating the relief valve. The Note applies to relief valves employed as isolation devices in either the backflow or forward (relief) flow direction. The failure of a relief valve to remain closed during or following an accident is considered a low probability because relief valves are passive isolation devices that do not require mechanical movement to perform the isolation function and the relief setpoint provides sufficient margin to preclude the potential for premature opening due to containment post-accident pressures. Relief valves that are one-inch or smaller provide an additional physical barrier because the size restriction would limit leakage such that a large early release would not occur. Penetration configurations that meet Criterion 2 provide an additional physical barrier of a closed system. In the unlikely event that a relief valve larger than one-inch were to fail to remain closed, the leakage would be into a system which forms a closed loop outside primary containment and any containment leakage would return to primary containment through this closed loop. In accordance with Reference 4, a closed system outside the containment shall meet Quality Group B and Seismic Category 1 standards. Valves which isolate the branch lines of these closed systems are normally closed and under strict administrative control. Typical closed systems used as isolation barriers are identified in Tables 6.2-44 and 6.2-49 of Reference 2. For penetrations isolated in accordance with Required Action A.1, the device used to isolate the penetration should be the closest one available to the primary containment. The Required Action must be completed within the 4 hour Completion Time (8 hours for main steam lines). The specified time period of 4 hours is reasonable considering the time required to isolate the penetration and the relative importance of supporting primary containment OPERABILITY during MODES 1, 2, and 3. For main steam lines, an 8 hour Completion Time is allowed. The Completion Time of 8 hours for the main steam lines allows a period of time to restore the MSIVs to OPERABLE status given the fact that MSIV closure will result in isolation of the main steam line(s) and a potential for plant shutdown.

(continued)

BASES

ACTIONS

A.1 and A.2 (continued)

For affected penetrations that have been isolated in accordance with Required Action A.1, the affected penetration flow path must be verified to be isolated on a periodic basis. This is necessary to ensure that primary containment penetrations required to be isolated following an accident, and no longer capable of being automatically isolated, will be isolated should an event occur. This Required Action does not require any testing or device manipulation. Rather, it involves verification that those devices outside primary containment, drywell, and steam tunnel and capable of being mispositioned are in the correct position. The Completion Time for this verification of "once per 31 days for isolation devices outside primary containment, drywell, and steam tunnel," is appropriate because the devices are operated under administrative controls and the probability of their misalignment is low. For devices inside primary containment, drywell, or steam tunnel, the specified time period of "prior to entering MODE 2 or 3 from MODE 4, if not performed within the previous 92 days," is based on engineering judgment and is considered reasonable in view of the inaccessibility of the devices and the existence of other administrative controls ensuring that device misalignment is an unlikely possibility.

Required Action A.2 is modified by a Note that applies to isolation devices located in high radiation areas and allows them to be verified by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted. Therefore, the probability of misalignment; once they have been verified to be in the proper position, is low.

B.1

With one or more penetration flow paths with two PCIVs inoperable except due to leakage not within limits, either the inoperable PCIVs must be restored to OPERABLE status or the affected penetration flow path must be isolated within 1 hour. The method of isolation must include the use of at least one isolation barrier that cannot be adversely

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BASES

ACTIONS B.1 (continued)

affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve, and a blind flange. This Action is modified by a Note which allows automatic relief valves with a relief setpoint of at least 1.5 times containment design pressure (i.e., 23 psig) to be used to isolate penetration flow path without being de-activated provided one of the following criteria is met: 1) the relief valve is one-inch nominal size or less or 2) the flow paths is into a closed system whose piping pressure rating exceeds the containment design pressure rating. This preserves both the containment isolation function and the system overpressure protection function. The Note also avoids unnecessary safety system unavailability time and unnecessary occupational dose that would be associated with de-activating the relief valve. The Note applies to relief valves employed as isolation devices in either the backflow or forward (relief) flow direction. The failure of a relief valve to remain closed during or following an accident is considered a low probability because relief valves are passive isolation devices that do not require mechanical movement to perform the isolation function and the relief setpoint provides sufficient margin to preclude the potential for premature opening due to containment post-accident pressures. Relief valves that are one-inch or smaller provide an additional physical barrier because the size restriction would limit leakage such that a large early release would not occur. Penetration configurations that meet Criterion 2 provide an additional physical barrier of a closed system. In the unlikely event that a relief valve larger than one-inch were to fail to remain closed, the leakage would be into a system which forms a closed loop outside primary containment and any containment leakage would return to primary containment through this closed loop. In accordance with Reference 4, a closed system outside the containment shall meet Quality Group B and Seismic Category 1 standards. Valves which isolate the branch lines of these closed systems are normally closed and under strict administrative control. Typical closed systems used as isolation barriers are identified in Tables 6.2-44 and 6.2-49 of Reference 2. The 1 hour Completion Time is consistent with the ACTIONS of LCO 3.6.1.1.

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BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.1.3.9 (continued)

pressurized and primary containment is required. In some instances, the valves are required to be capable of automatically closing during MODES other than MODES 1, 2, and 3. However, specific leakage limits are not applicable in these other MODES or conditions.

REFERENCES

1. UFSAR, Chapter 15.

2. UFSAR, Section 6.2.

3. 10 CFR 50, Appendix J.

4. NUREG-0831, Safety Evaluation Report, Supplement 1, Section 6.2.4.