Entergy

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GNRO-2006/00056

November 13, 2006

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

SUBJECT: Grand Gulf Nuclear Station, Unit 1
Docket No. 50-416
License Amendment Request
Application for Adoption of TSTF–484, Rev. 0, "Use of TS 3.10.1 for Scram Time Testing Activities" Using the Consolidated Line Item Improvement Process

Dear Sir or Madam:

In accordance with the provisions of Section 50.90 of Title 10 of the Code of Federal Regulations (10 CFR), Entergy Operations, Inc. (Entergy) is submitting a request for an amendment to the Technical Specifications (TS) for Grand Gulf Nuclear Station (GGNS), Unit 1.

The proposed amendment would revise LCO 3.10.1, and the associated Bases, to expand its scope to include provisions for temperature excursions greater than 200°F as a consequence of inservice leak and hydrostatic testing, and as a consequence of scram time testing initiated in conjunction with an inservice leak or hydrostatic test, while considering operational conditions to be in MODE 4.

This change is consistent with NRC approved Revision 0 to Technical Specification Task Force (TSTF) Improved Standard Technical Specification Change Traveler, TSTF– 484, "Use of TS 3.10.1 for Scram Time Testing Activities". The availability of the model safety evaluation for this TS improvement was announced in the *Federal Register* on October 27, 2006 (71 FR 63050) as part of the Consolidated Line Item Improvement Process (CLIIP).

Attachment 1 provides a description of the proposed change. Attachment 2 provides the existing TS pages marked up to show the proposed change. Attachment 3 provides summary of the regulatory commitments made in this submittal. Attachment 4 provides the existing TS Bases pages marked up to show the proposed change (for information only).

Entergy requests approval of the proposed amendment by February 15, 2007. Once approved, the amendment shall be implemented within 60 days. Although this request is neither exigent nor emergency, your prompt review is requested.

If you have any questions or require additional information, please contact Mr. Matt Crawford at (601) 437-2334.

I declare under penalty of perjury that the foregoing is true and correct. Executed on November 13, 2006.

Sincerely,

William R. Brian
GGNS Vice President, Operations

MLC/amt

Attachments:
1. Description and Assessment
2. Proposed Technical Specification Changes
3. Regulatory Commitments
4. Proposed Technical Specification Bases Changes

cc: (See Next Page)

cc: NRC Senior Resident Inspector
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Mr. L. J. Smith (Wise Carter)
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Mr. J. N. Compton

Attachment 1

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Description and Assessment

License Amendment Request for Adoption of TSTF–484, Rev. 0, "Use of TS 3.10.1 for SCRAM Time Testing Activities"

1.0 Description
2.0 Proposed Change
3.0 Background
4.0 Technical Analysis
5.0 Regulatory Safety Analysis
5.1 No Significant Hazards Determination
5.2 Applicable Regulatory Requirements/Criteria
6.0 Environmental Consideration
7.0 References

1.0 DESCRIPTION

The proposed amendment would revise Grand Gulf Nuclear Station (GGNS), Unit 1 Technical Specification (TS) LCO 3.10.1, and the associated Bases, to expand its scope to include provisions for temperature excursions greater than 200°F as a consequence of inservice leak and hydrostatic testing, and as a consequence of scram time testing initiated in conjunction with an inservice leak or hydrostatic test, while considering operational conditions to be in MODE 4.

This change is consistent with NRC approved Revision 0 to Technical Specification Task Force (TSTF) Improved Standard Technical Specification Change Traveler, TSTF– 484, "Use of TS 3.10.1 for Scram Time Testing Activities." The availability of the model safety evaluation for this TS improvement was announced in the *Federal Register* on October 27, 2006 (71 FR 63050) as part of the Consolidated Line Item Improvement Process (CLIIP).

2.0 PROPOSED CHANGE

Consistent with the NRC approved Revision 0 of TSTF–484, the proposed TS changes include a revised TS 3.10.1, "Inservice Leak and Hydrostatic Testing Operation." Proposed revisions to the TS Bases are also included in this application. Adoption of the TS Bases associated with TSTF–484, Revision 0 is an integral part of implementing this TS Amendment. The changes to the affected TS Bases pages will be incorporated in accordance with the TS Bases Control Program. This application is being made in accordance with the CLIIP. Entergy is not proposing variations or deviations from the TS changes described in TSTF–484, Revision 0, or the NRC staff's model Safety Evaluation (SE) published on October 27, 2006 (71 FR 63050) as part of the CLIIP Notice of Availability.

3.0 BACKGROUND

The background for this application is adequately addressed by the NRC Notice of Availability of Model Safety Evaluation on Technical Specification Improvement to Modify Requirements Regarding LCO 3.10.1 published on October 27, 2006 (71 FR 63050).

4.0 TECHNICAL ANALYSIS

Entergy has reviewed the Safety Evaluation (SE) published on October 27, 2006 (71 FR 63050) as part of the CLIIP Notice of Availability of the Model Safety Evaluation. Entergy has concluded that the technical justifications presented in the SE prepared by the NRC staff are applicable to Grand Gulf, Unit 1 and therefore justify this amendment for the incorporation of the proposed changes to the Grand Gulf, Unit 1 TS.

5.0 REGULATORY SAFETY ANALYSIS

5.1 No Significant Hazards Consideration Determination

Entergy has reviewed the proposed No Significant Hazards Consideration Determination (NSHCD) published in the *Federal Register* as part of the Notice of Opportunity To Comment on Model Safety Evaluation on Technical Specification Improvement to Modify Requirements Regarding LCO 3.10.1 published on August 21, 2006 (71 FR 48561). Entergy has concluded that the proposed NSHCD presented in the Federal Register notice is applicable to GGNS, Unit 1 and is hereby incorporated by reference to satisfy the requirements of 10 CFR 50.91(a).

5.2 Applicable Regulatory Requirements/Criteria

A description of the proposed TS change and its relationship to applicable regulatory requirements was provided in the NRC Notice of Availability of the Model Safety Evaluation published on October 27, 2006 (71 FR 63050).

6.0 ENVIRONMENTAL CONSIDERATION

Entergy has reviewed the environmental evaluation included in the safety evaluation published on October 27, 2006 (71 FR 63050) as part of the CLIIP Notice of Availability of the Model Safety Evaluation. Entergy has concluded that the staff's findings presented in that evaluation are applicable to GGNS, Unit 1 and the evaluation is hereby incorporated by reference for this application.

7.0 REFERENCES

1. Federal Register Notice (71 FR 48561), dated August 21, 2006, "Notice of Opportunity to Comment on Model Safety Evaluation on Technical Specification Improvement to Modify Requirements Regarding LCO 3.10.1,Inservice Leak and Hydrostatic Testing Operation Using the Consolidated Line Item Improvement Process."

2. Federal Register Notice (71 FR 63050), dated October 27, 2006, "Notice of Availability of Model Safety Evaluation on Technical Specification Improvement to Modify Requirements Regarding LCO 3.10.1,Inservice Leak and Hydrostatic Testing Operation Using the Consolidated Line Item Improvement Process."

3. Federal Register Notice (71 FR 55807), dated September 25, 2006, "Notice of Opportunity to Comment on Model Application on Technical Specification Improvement to Modify Requirements Regarding LCO 3.10.1,Inservice Leak and Hydrostatic Testing Operation Using the Consolidated Line Item Improvement Process.

4. Technical Specification Task Force (TSTF) Improved Technical Specification Change Traveler, TSTF-484 "Use of TS 3.10.1 for Scram Time Testing Activities", Revision 0.

Attachment 2

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Proposed Technical Specification Changes

3.10 SPECIAL OPERATIONS

3.10.1 Inservice Leak and Hydrostatic Testing Operation

LCO 3.10.1 The average reactor coolant temperature specified in Table 1.1-1 for MODE 4 may be changed to "NA," and operation considered not to be in MODE 3; and the requirements of LCO 3.4.10, "Residual Heat Removal (RHR) Shutdown Cooling System—Cold Shutdown," may be suspended, to allow ~~performance of an inservice leak or hydrostatic test~~ provided the following MODE 3 LCOs are met:

reactor coolant temperature > 200°F:

a. LCO 3.3.6.2, "Secondary Containment Isolation Instrumentation," Functions 1, 2, 3, 4, and 5 of Table 3.3.6.2-1;

b. LCO 3.6.4.1, "Secondary Containment";

c. LCO 3.6.4.2, "Secondary Containment Isolation Valves (SCIVs)"; and

d. LCO 3.6.4.3, "Standby Gas Treatment (SGT) System."

APPLICABILITY: MODE 4 with average reactor coolant temperature > 200°F.

- For performance of an inservice leak or hydrostatic test,
- As a consequence of maintaining adequate pressure for an inservice leak or hydrostatic test, or
- As a consequence of maintaining adequate pressure for control rod scram time testing initiated in conjunction with an inservice leak or hydrostatic test,

Attachment 3

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Regulatory Commitments

List of Regulatory Commitments

The following table identifies those actions committed to by ENTERGY in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments.

COMMITMENT	TYPE (Check One)		SCHEDULED COMPLETION DATE (If Required)
	ONE-TIME ACTION	CONTINUING COMPLIANCE	
ENTERGY will establish the Technical Specification Bases for LCO 3.10.1 as adopted with the applicable license amendment.	X		60 days following NRC approval of the License Amendment Request

Attachment 4

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Proposed Technical Specification Bases Changes

B 3.10 SPECIAL OPERATIONS

B 3.10.1 Inservice Leak and Hydrostatic Testing Operation

BASES

BACKGROUND

The purpose of this Special Operations LCO is to allow certain reactor coolant pressure tests to be performed in MODE 4 when the metallurgical characteristics of the reactor pressure vessel (RPV) require the pressure testing at temperatures > 200°F (normally corresponding to MODE 3).

INSERT 1

Inservice hydrostatic testing and system leakage pressure tests required by Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Ref. 1) are performed prior to the reactor going critical after a refueling outage. Recirculation pump operation and a water solid RPV (except for an air bubble for pressure control) are used to achieve the necessary temperatures and pressures required for these tests. The minimum temperatures (at the required pressures) allowed for these tests are determined from the RPV pressure and temperature (P/T) limits required by LCO 3.4.11, "Reactor Coolant System (RCS) Pressure and Temperature (P/T) Limits." These limits are conservatively based on the fracture toughness of the reactor vessel, taking into account anticipated vessel neutron fluence.

With increased reactor vessel fluence over time, the minimum allowable vessel temperature increases at a given pressure. Periodic updates to the RCS P/T limit curves are performed as necessary, based on the results of analyses of irradiated surveillance specimens removed from the vessel. Hydrostatic and leak testing will eventually be required with minimum reactor coolant temperatures > 200°F.

INSERT 2

APPLICABLE SAFETY ANALYSES

Allowing the reactor to be considered in MODE 4 during hydrostatic or leak testing, when the reactor coolant temperature is > 200°F, effectively provides an exception to MODE 3 requirements, including OPERABILITY of primary containment and the full complement of redundant Emergency Core Cooling Systems (ECCS). Since the hydrostatic or leak tests are performed nearly water solid, at low decay heat values, and near MODE 4 conditions, the stored energy in the reactor core will be very low. Under these conditions, the potential for failed fuel and a subsequent increase in

during or as a consequence of, hydrostatic or leak testing, or as a consequence of control rod scram lime testing initiated in conjunction with an inservice leak or hydrostatic test,

(continued)

BASES

LCO (continued)

> 200°F, while the ASME inservice test itself requires the safety/relief valves to be gagged, preventing their OPERABILITY.

INSERT 3

If it is desired to perform these tests while complying with this Special Operations LCO, then the MODE 4 applicable LCOs and specified MODE 3 LCOs must be met. This Special Operations LCO allows changing Table 1.1-1 temperature limits for MODE 4 to "NA" and suspending the requirements of LCO 3.4.10, "Residual Heat Removal (RHR) Shutdown Cooling System—Cold Shutdown." The additional requirements for secondary containment LCOs to be met will provide sufficient protection for operations at reactor coolant temperatures > 200°F for the purposes of performing either an inservice leak or hydrostatic test.

, and for control rod scram time testing initiated in conjunction with an inservice leak or hydrostatic test.

This LCO allows primary containment to be open for frequent unobstructed access to perform inspections, and for outage activities on various systems to continue consistent with the MODE 4 applicable requirements that are in effect immediately prior to and immediately after this operation.

APPLICABILITY

The MODE 4 requirements may only be modified for the performance of inservice leak or hydrostatic tests so that these operations can be considered as in MODE 4, even though the reactor coolant temperature is > 200°F. The additional requirement for secondary containment OPERABILITY according to the imposed MODE 3 requirements provides conservatism in the response of the unit to any event that may occur. Operations in all other MODES are unaffected by this LCO.

,or as a consequence of,

ACTIONS

A Note has been provided to modify the ACTIONS related to inservice leak and hydrostatic testing operation. 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

(continued)

or as a consequence of control rod scram time testing initiated in conjunction with an inservice leak or hydrostatic test,

Bases Inserts

(Applicable to Technical Specification Pages B 3.10-1 & B 3.10-3)

INSERT 1

or to allow completing these reactor coolant pressure tests when the initial conditions do not require temperatures > 200°F. Furthermore, the purpose is to allow continued performance of control rod scram time testing required by SR 3.1.4.1 or SR 3.1.4.4 if reactor coolant temperatures exceed 200°F when the control rod scram time testing is initiated in conjunction with an inservice leak or hydrostatic test. These control rod scram time tests would be performed in accordance with LCO 3.10.4, "Single Control Rod Withdrawal - Cold Shutdown," during MODE 4 operation.

INSERT 2

However, even with required minimum reactor coolant temperatures < 200°F, maintaining RCS temperatures within a small band during the test can be impractical. Removal of heat addition from recirculation pump operation and reactor core decay heat is coarsely controlled by control rod drive hydraulic system flow and reactor water cleanup system non-regenerative heat exchanger operation. Test conditions are focused on maintaining a steady state pressure, and tightly limited temperature control poses an unnecessary burden on the operator and may not be achievable in certain instances.

Scram time testing required by SR 3.1.4.1 and SR 3.1.4.4 requires reactor steam dome pressure > 950 psig. The hydrostatic and/or RCS leakage tests require pressure of approximately 1,000 psig.

Other testing may be performed in conjunction with the allowances for inservice leak or hydrostatic tests and control rod scram time tests.

INSERT 3

Additionally, even with required minimum reactor coolant temperatures < 200°F, RCS temperatures may drift above 200°F during the performance of inservice leak and hydrostatic testing or during subsequent control rod scram time testing, which is typically performed in conjunction with inservice leak and hydrostatic testing. While this Special Operations LCO is provided for inservice leak and hydrostatic testing, and for scram time testing initiated in conjunction with an inservice leak or hydrostatic test, parallel performance of other tests and inspections is not precluded.