



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

January 15, 2010

Vice President, Operations
Entergy Operations, Inc.
Grand Gulf Nuclear Station
P.O. Box 756
Port Gibson, MS 39150

SUBJECT: GRAND GULF NUCLEAR STATION, UNIT 1 – REQUEST FOR ADDITIONAL
INFORMATION RE: POWER RANGE NEUTRON MONITORING SYSTEM (TAC
NO. ME2531)

Dear Sir or Madam:

By application dated November 3, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML093140430), Entergy Operations, Inc. (Entergy, the licensee), requested U.S. Nuclear Regulatory Commission (NRC) staff approval of an amendment to the Grand Gulf Nuclear Station, Unit 1, technical specifications to reflect installation of the digital General Electric - Hitachi (GEH) Nuclear Measurement Analysis and Control (NUMAC) Power Range Neutron Monitoring (PRNM) System.

The NRC staff reviewed the information provided in your application and determined that additional information is required in order to complete its review. The enclosed questions were discussed with Mr. G. Davant of your staff on January 7, 2010. Please provide a response to the enclosed questions within 45 days of the date of this letter.

The NRC staff considers that timely responses to requests for additional information help ensure sufficient time is available for NRC staff review and contribute toward the NRC's goal of efficient and effective use of NRC staff resources. If circumstances result in the need to revise the requested response date, please contact me at 301-415-2296 or via e-mail at fred.lyon@nrc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "C. Lyon".

Carl F. Lyon, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-416

Enclosure:
Request for Additional Information

cc w/encl: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION

POWER RANGE NUCLEAR MONITORING SYSTEM UPGRADE

GRAND GULF NUCLEAR STATION, UNIT 1

DOCKET NO. 50-416

By application dated November 3, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML093140430), Entergy Operations, Inc. (Entergy, the licensee), requested U.S. Nuclear Regulatory Commission (NRC) staff approval of an amendment to the Grand Gulf Nuclear Station (GGNS), Unit 1, technical specifications (TS) to reflect installation of the digital General Electric - Hitachi (GEH) Nuclear Measurement Analysis and Control (NUMAC) Power Range Neutron Monitoring (PRNM) System. The NRC staff requests the following additional information (RAI) from the licensee to complete its review of the proposed application.

RAI No. 1

Please explain how a unit restart is allowed by adding the note, "LCO 3.0.4.b is not applicable" to new Required Action J.2.

Attachment 1, page 14 of the application letter states, "Entergy also proposes a note that states LCO 3.0.4.b is not applicable to new Required Action J.2. This note allows unit restart in the event of a shutdown during the 120-day completion time." However, Limiting Condition for Operation (LCO) 3.0.4.a and LCO 3.0.4.c remain applicable. LCO 3.0.4.a allows entry into a MODE or other specified condition in the Applicability, when an LCO is not met, only when the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time. Condition J is referenced in Table 3.3.1.1-1 and entered as required by Required Action D.1. Condition J Required Action J.1 requires initiating an alternate method to detect and suppress thermal hydraulic instability oscillations within 12 hours and J.2 requires restoring the required channels to operable status within 120 days. Condition J does not permit continued operation for an unlimited period of time. LCO 3.0.4.c allows entry into a MODE or other specified condition in the Applicability, when an LCO is not met, only when an allowance is stated in the individual value, parameter, or other Specification. LCO 3.0.4.c is not allowed in any condition in GGNS TS 3.3.1.1.

RAI No. 2

Please provide revised proposed TS Bases changes that are consistent with Technical Specification Task Force (TSTF)-493, Revision 4, or justify deviations.

The applicability section in *Federal Register* (74 FR 58065; November 10, 2009), "Notice of Opportunity for Public Comment on the Proposed Model Safety Evaluation for Plant-Specific Adoption of Technical Specification Task Force Traveler-493, Revision 4,

Enclosure

“Clarify Application of Setpoint Methodology for LSSS [Limited Safety System Settings] Functions” stated, “The licensee must add footnotes to all the functions identified in TSTF Traveler-493, Revision 4, Appendix A, and must incorporate the related TS Bases changes” for any licensee wishing to adopt TSTF-493, option A, without changes to setpoint values. The NRC staff considers the changes made by TSTF-493, Revision 4 to TS 3.3.1.1 Bases sections: (1) background; (2) applicable safety analyses, LCO, and applicability; (3) actions; and (4) surveillance requirements (SRs), to be related to GGNS proposed amendment.

RAI No. 3

Please state which SRs verify trip setpoint settings for functions 2.a, 2.b, 2.c, 2.d, 2.e, and 2.f in TS Table 3.3.1.1-1, and provide a revised TS Table 3.3.1.1-1 with the addition of notes (d) and (e) for these functions as needed.

The proposed change revises GGNS TSs to incorporate NRC-approved TSTF Traveler-493, Revision 4, to be consistent with Option A. Option A, without changes to setpoint values, adds two Notes to the SRs in the Surveillance Requirements column of TSs Instrumentation Function Tables. Specifically, Notes are added to TS 3.3.1.1 SRs that require verifying trip setpoint setting values (i.e., Channel Calibration and Channel Functional Test SRs) for NUREG-1434.

The first Surveillance Note requires evaluation of channel performance for the condition where the As-Found setting for the channel setpoint is outside its As-Found Tolerance but conservative with respect to the allowable value. This is proposed note (d) to TS Table 3.3.1.1-1. The second Surveillance Note requires that the As-Left setting for the channel be returned to within the As-Left Tolerance of the Nominal Trip Setpoint. This is proposed note (e) to TS Table 3.3.1.1-1.

RAI No. 4

In its application, the licensee proposed the following new operating license condition (OLC):

During Cycle 19, GGNS may conduct monitoring of the Oscillation Power Range Monitor (OPRM). During this time, the OPRM Upscale function (Function 2.f of Technical Specification Table 3.3.1.1-1) may be disabled and operated in an “indicate only” mode at which time technical specification requirements would not apply. During such time, Backup Stability Protection measures will be implemented via GGNS procedures to provide an alternate method to detect and suppress reactor core thermal hydraulic instability oscillations.

In the application, the licensee stated that it would review the operating data, setpoints, and margins at the end of the OPRM monitoring period. Once it determines that the results are acceptable, the licensee will enable the OPRM (with applicable SRs met) by connecting it to the reactor protection system trip relays, completing implementation of the hardware changes, and notifying the NRC.

However, the proposed OLC wording does not restrict GGNS from returning the OPRM into "indicate only" mode, once the OPRM has been enabled during Cycle 19. Also, the proposed "may" wording in the OLC suggests that GGNS has the option to disable the OPRM and conduct monitoring of the OPRM. Please revise the proposed OLC to address these concerns or provide further justification for the proposed wording.

January 15, 2010

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Sincerely,

/RA/

Carl. F. Lyon, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-416

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ADAMS Accession No: ML100070385

*memo dated

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