



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

July 27, 2012

Mr. Michael Perito
Vice President, Site
Entergy Operations, Inc.
P.O. Box 756
Port Gibson, MS 39150

SUBJECT: REQUESTS FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE
GRAND GULF NUCLEAR STATION LICENSE RENEWAL APPLICATION
(TAC NO. ME7493)

Dear Mr. Perito:

By letter dated October 28, 2011, Entergy Operations, Inc., submitted an application pursuant to Title 10 of the *Code of Federal Regulations* Part 54, to renew the operating license for Grand Gulf Nuclear Station, Unit 1, for review by the U.S. Nuclear Regulatory Commission (NRC or the staff). The staff is reviewing the information contained in the license renewal application and has identified, in the enclosure areas where additional information is needed to complete the review.

These requests for additional information were discussed with Jeff Seiter, and a mutually agreeable date for the response is within 30 days from the date of this letter. If you have any questions, please contact me at 301-415-1045 or by e-mail at nathaniel.ferrer@nrc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "N. Ferrer", with a long horizontal flourish extending to the right.

Nathaniel Ferrer, Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket No. 50-416

Enclosure:
Requests for Additional
Information

cc w/encl: Listserv

GRAND GULF NUCLEAR STATION
LICENSE RENEWAL APPLICATION
REQUESTS FOR ADDITIONAL INFORMATION SET 30

RAI 3.0.5-1

Background. Pursuant to 10 CFR 54.21(a)(3), a license renewal applicant is required to demonstrate that the effects of aging on structures and components subject to an aging management review are adequately managed so that their intended functions will be maintained consistent with the current licensing basis for the period of extended operation. Section 3.0.1 of NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants," Revision 2 (SRP-LR), defines an aging management review as the identification of the materials, environments, aging effects, and aging management programs (AMPs) credited for managing the aging effects. SRP-LR Section A.1.2.3 defines an acceptable AMP as consisting of ten elements, including Element 10, "Operating Experience," which is described in SRP-LR Section A.1.2.3.10, Paragraph 1 (in part), as follows:

Consideration of future plant-specific and industry operating experience relating to aging management programs should be discussed. Reviews of operating experience by the applicant in the future may identify areas where aging management programs should be enhanced or new programs developed. An applicant should commit to a *future review of plant-specific and industry operating experience to confirm the effectiveness of its aging management programs or indicate a need to develop new aging management programs* (emphasis added). This information should provide objective evidence to support the conclusion that the effects of aging will be managed adequately so that the structure and component intended function(s) will be maintained during the period of extended operation.

In addition, 10 CFR 54.21(d) requires the application to contain a final safety analysis report (FSAR) supplement. This supplement must contain a summary description of the programs and activities for managing the effects of aging and the evaluation of time-limited aging analyses for the period of extended operation.

The NRC issued License Renewal Interim Staff Guidance (LR-ISG)-2011-05, "Ongoing Review of Operating Experience," dated March 16, 2012, to clarify the staff's position that license renewal AMPs should be informed, and enhanced when necessary, based on the ongoing review of both plant-specific and industry operating experience.

Based on its review of the Grand Gulf Nuclear Station, Units 1, license renewal application (LRA), the staff determined that Section B.0.4 provides a general description of how the applicant gathered and considered operating experience in preparing its LRA, and Sections B.1.1 through B.1.44 summarize the specific operating experience considered for each AMP.

Issue. LRA Sections B.0.4 and B.1.1 through B.1.44 describe how the applicant incorporated operating experience into its AMPs and will monitor internal and external operating experience on an ongoing basis. The applicant states that the Operating Experience Program and the

Corrective Action Program (CAP) are used to evaluate operating experience to enhance AMPs and ensure the effectiveness of AMPs. However, the LRA does not provide specific details to describe the Operating Experience Program and CAP and how they are used to monitor operating experience on an ongoing basis and ensure the continued effectiveness of AMPs. The LRA also does not state whether new AMPs will be developed, as necessary.

Request.

- a. Describe the programmatic activities that will be used to continually identify aging issues, evaluate them and, as necessary, enhance the AMPs or develop new AMPs for license renewal. Indicate whether these activities and programs will be consistent with guidance described in LR-ISG-2011-05. If not consistent, provide the basis for the conclusion that the programmatic activities will ensure operating experience will be reviewed on an ongoing basis to address age-related degradation and aging management during the term of the renewed license
- b. Consistent with the response to Request (a) above, provide a summary description in the updated FSAR supplement of how operating experience will be reviewed on an ongoing basis to address age-related degradation and aging management during the term of the renewed license.

RAI B.1.42-1a

Background. Generic Aging Lessons Learned (GALL) Report aging management program (AMP) XI.S6, "Structures Monitoring," program element "detection of aging effects," states that in general, all structures are monitored on a frequency not to exceed 5 years. The GALL Report further states that some structures of lower safety significance, and subjected to benign environmental conditions, may be monitored at an interval exceeding 5 years; however, they should be identified and listed, together with their operating experience.

Issue. The LRA states that the Structures Monitoring Program, with enhancements, is consistent with the GALL Report AMP XI.S6. In its response to RAI B.1.42-1, dated May 30, 2012, the applicant stated that an enhancement identified in LRA Section B.1.42 will require inspections every 5 years for structures and structural components within the scope of license renewal unless technical justification is provided to extend the inspection interval to 10 years. The applicant further stated that this enhancement will also ensure that in-scope structures are inspected at least once every 10 years during the period of extended operation. GALL Report AMP XI.S6 does allow some structures of lower safety significance, and subject to benign environmental conditions, to be monitored at an interval exceeding 5 years; however, the structures should be identified and listed, together with their operating experience. It is not clear whether all structures and structural components, within the scope of license renewal, will be monitored on a frequency not to exceed 5 years consistent with the recommendations in the GALL Report, or if the applicant plans to extend the inspection interval for structures of lower safety significance.

Request.

- a. Clarify if all structures and structural components, within the scope of license renewal, will be inspected every 5 years consistent with recommendations in GALL Report AMP XI.S6.
- b. If there are structures and structural components that will be inspected at a frequency greater than the 5-year interval as recommended in GALL Report AMP XI.S6, identify and list the structures and structural components, and provide technical justification (e.g., safety significance, environmental conditions, and operating experience) for this inspection frequency that demonstrates that aging effects will be detected before there is loss of intended function(s).

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/RA/
Nathaniel Ferrer, Project Manager
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Docket No. 50-416

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