



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

October 19, 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, UNIT 1 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 (GGNS) 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 e-mail nathaniel.ferrer@nrc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "N. Ferrer", with a long horizontal line 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:
As stated

cc w/encl: Listserv

GRAND GULF NUCLEAR STATION
 LICENSE RENEWAL APPLICATION
 REQUESTS FOR ADDITIONAL INFORMATION SET 40

RAI 3.5.1-1

Background. License renewal application (LRA) Table 3.5.1 identifies several items as “not applicable” with a further discussion stating that the “listed aging effects do not require management at GGNS. Nonetheless, components are included in the [GALL recommended program(s)] to verify the absence of other aging effects, such as...” The table below contains two examples:

Item Number	Component	Aging Effect/ Mechanism	Aging Management Programs	Further Evaluation Recommended	Discussion
3.5.1-55	Building concrete at locations of expansion and grouted anchors; grout pads for support base plates	Reduction in concrete anchor capacity due to local concrete degradation/ service induced cracking or other concrete aging mechanisms	Structures Monitoring Program	No	Not applicable. Listed aging effects do not require management at GGNS. Nonetheless, components are included in the Structures Monitoring Program to verify the absence of other aging effects, such as cracking, for components in this listing.
3.5.1-30	Pressure-retaining bolting	Loss of preload due to self-loosening	ISI (IWE) and 10 CFR Part 50, Appendix J	No	Not applicable. Listed aging effects do not require management at GGNS. Nonetheless, bolting components are included in the Containment Inservice Inspection – IWE and Containment Leak Rate Programs to verify

ENCLOSURE

					the absence of other aging effects, such as loss of materials, for the listed components.
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Issue. For these items that the applicant has identified as “not applicable,” but stated that the components are included in the GALL recommended program(s) to verify the absence of other aging effects, sufficient information has not been provided to verify the applicant’s assertion that the aging effect(s) identified in the GALL Report would not require management at GGNS. It is not clear if the identified aging effect will be managed for the listed component(s) as recommended in the GALL Report. Although the LRA states that the components are included in the program, the staff’s concern is that the applicant proposes to verify the absence of other aging effects, which is not equivalent to managing the identified aging effect(s) for the component, material, and environment combination.

In accordance with § 54.21(a)(3), for each structure and component subject to an aging management review, the applicant must demonstrate that the effects of aging will be adequately managed so that the intended function(s) will be maintained consistent with the current licensing basis (CLB) for the period of extended operation. For all items where the GALL Report does not recommend further evaluation (i.e., the Further Evaluation Recommended column in LRA Table 3.5.1 is populated with the word “no”), the staff is seeking clarification and sufficient technical justification for excluding the listed aging effects from management.

Request.

- a. For each item in Table 3.5.1 where no further evaluation is recommended that the applicant has identified as “not applicable,” but stated that the components are included in the GALL recommended program(s) to verify the absence of other aging effects, provide the technical justification as to why the aging effect recommended in the GALL Report and specified in Table 3.5.1 line item does not apply, to GGNS, and/or why that aging effect does not require management.
- b. If it is determined that components will be age-managed as recommended in the GALL Report, identify which aging management program(s) will be used to manage the identified aging effect during the period of extended operation.

RAI 3.5.1-2

Background. LRA Table 3.5.1 identifies several items as “Consistent with NUREG-1801,” however, in the Discussion column, the applicant states that the “listed aging effects do not require management at GGNS.” The discussion further states, “Nonetheless, components are included in the [GALL recommended program(s)] to verify the absence of [other aging effects], for components in this listing.” Those components are identified in LRA Table 3.5.2, classified as generic note I with a plant-specific note 501, indicating that the aging effect is not applicable because the GGNS environment is not conducive to the listed aging effects. The table below contains an example:

Item Number	Component	Aging Effect/ Mechanism	Aging Management Programs	Further Evaluation Recommended	Discussion
3.5.1-24	Concrete (inaccessible areas): dome; wall; basemat; ring girders; buttresses, Concrete (inaccessible areas): basemat, Concrete (accessible areas): dome; wall; basemat	Increase in porosity and permeability, cracking, loss of material (spalling, scaling) due to aggressive chemical attack	ISI (IWL) or Structures Monitoring Program	No	Consistent with NUREG-1801. Listed aging effects does not require management at GGNS. Nonetheless, components are included in the Structures Monitoring Program to verify the absence of aging effects, such as cracking and loss of material, for components in this listing.

Issue. For the LRA Table 3.5.2 items that the applicant has classified as generic note I, plant-specific note 501, the GALL Report identifies the aging effect requiring management for the listed component, material, and environment combination. The applicant does not provide a technical basis for the statement that the aging effect requiring management, recommended by the GALL Report, is not applicable at GGNS. The applicant's statement that the GGNS environment is not conducive to the listed aging effects does not provide an adequate justification. Sufficient information has not been provided to verify the applicant's assertion.

In accordance with § 54.21(a)(3), for each structure and component subject to an aging management review, the applicant must demonstrate that the effects of aging will be adequately managed so that the intended function(s) will be maintained consistent with the CLB for the period of extended operation. Verifying the absence of other aging effects is not equivalent to managing the identified aging effect.

Request. For each LRA Table 3.5.2 item that cites generic note I, plant-specific note 501:

- a. Clarify if the listed aging effect will be managed by the proposed program when the Discussion column states that listed aging effects does not require management at GGNS, but nonetheless, the components are included in the GALL recommended program to verify the absence of other aging effects.
- b. If the aging effect will not be managed, provide technical justification as to why the GGNS environment would not be conducive to the listed aging effects.

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Sincerely,

/RA/

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

Docket No. 50-416

Enclosure:
As stated

cc w/encl: Listserv

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Letter to M. Perito from N. Ferrer dated October 19, 2012

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GRAND GULF NUCLEAR STATION, LICENSE RENEWAL APPLICATION

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