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GNRO-2012/00066

June 22, 2012

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

SUBJECT: Response to Request for Additional Information (RAI) Set 19 dated May 29, 2012
Grand Gulf Nuclear Station, Unit 1
Docket No. 50-416
License No. NPF-29

REFERENCE: NRC Letter, "Requests for Additional Information for the Review of the Grand Gulf Nuclear Station, License Renewal Application," dated May 29, 2012 (GNRI-2012/00126) (ML12139A055)

Dear Sir or Madam:

Entergy Operations, Inc is providing, in the Attachment, the response to the referenced Request for Additional Information (RAI).

This letter contains no new commitments. If you have any questions or require additional information, please contact Christina L. Perino at 601-437-6299.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 22nd day of June, 2012.

Sincerely,

A handwritten signature in black ink, appearing to read "M. Perito".

MP/jas

Attachment: Response to Request for Additional Information (RAI)

cc: (see next page)

cc: with Attachment

Mr. John P. Boska, Project Manager
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cc: without Attachment

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NRC Senior Resident Inspector
Grand Gulf Nuclear Station
Port Gibson, MS 39150

**Attachment 1 to
GNRO-2012/00066
Response to Request for Additional Information (RAI)**

The format for the RAI responses below is as follows. The Request for Additional Information (RAI) is listed in its entirety as received from the Nuclear Regulatory Commission (NRC). This is followed by the Grand Gulf Nuclear Station (GGNS) RAI response to the individual question.

RAI 2.3.3.12-1

NUREG-0831, "Safety Evaluation Related to the Operation of Grand Gulf Nuclear Station , Units 1 and 2," Section 9.5.1.1, "Water Supply System," dated September 1981, discussed the radwaste building water supply system. The staff notes that license renewal application (LRA) boundary drawing LRA-M-0035G, shows the radwaste building fire water system as not within the scope of license renewal.

Verify whether the radwaste building fire water system is in the scope of license renewal in accordance with 10 CFR 54.4(a) and subject to an aging management review (AMR) in accordance with 10 CFR 54.21(a)(1). If the system is excluded from the scope of license renewal and not subject to an AMR, the staff requests that the applicant provide justification for the exclusion.

RAI 2.3.3.12-1 RESPONSE

The portions of the fire protection system in the radwaste building include no equipment credited with fire prevention, detection, or mitigation in areas containing equipment important to safe operation of the plant or systems that contain plant components credited for safe shutdown following a fire per 10 CFR 50.48. Therefore, the portions of the fire protection system in the radwaste building perform no intended function for license renewal and are not in the scope and not subject to aging management review.

RAI 2.3.3.12-2

The following LRA boundary drawing shows the following fire protection systems/components as not within the scope of license renewal:

<u>LRA Drawing</u>	<u>Systems/Components</u>	<u>Location</u>
LRA-M-0035L	Fire water suppression systems associated with Emergency Safety Features Transformers, ESF11 and ESF21	H3

The staff requests that the applicant verify whether the fire protection systems/components listed above are in the scope of license renewal in accordance with 10 CFR 54.4(a) and whether they are subject to an AMR in accordance with 10 CFR 54.21(a)(1). If they are excluded from the scope of license renewal and are not subject to an AMR, the staff requests that the applicant provide justification for the exclusion.

RAI 2.3.3.12-2 RESPONSE

Transformers ESF11 and ESF21 are the nonsafety-related source of power to engineered safeguards busses at GGNS during normal operation. The portions of the fire protection system associated with transformers ESF11 and ESF21 include no equipment credited with fire prevention, detection, or mitigation in areas containing equipment important to safe operation of the plant or systems that contain plant components credited for safe shutdown following a fire

per 10 CFR 50.48. The fire protection system components associated with emergency safety features transformers ESF11 and ESF21 perform no license renewal intended function and therefore, are not in the scope of license renewal and subject to an AMR.

RAI 2.3.3.12-3

LRA Tables 2.3.3-12 and 3.3.2-12 do not include the following fire protection components:

- fire hose connections, and hose racks
- pipe supports, hangers, and couplings
- yard fire hydrants
- water sprinklers and hose standpipe
- floor drains for fire water
- fire water systems associated with standby gas treatment system charcoal filters and containment exhaust system charcoal filters
- fire water supply filter housings
- dikes and curbs for oil spill confinement

Verify whether the fire protection components listed above are in the scope of license renewal in accordance with 10 CFR 54.4(a) and whether they are subject to an AMR in accordance with 10 CFR 54.21(a)(1). If they are excluded from the scope of license renewal and are not subject to an AMR, the staff requests that the applicant provide justification for the exclusion.

RAI 2.3.3.12-3 RESPONSE

Fire hose connections are in scope of license renewal and subject to aging management review as indicated in LRA table 2.3.3-12 under the component type “piping” with aging management review results in LRA table 3.3.2-12.

Hose racks are in scope of license renewal and subject to aging management review. Hose racks are included in the structural aging management review as component type “fire hose reels”. This item is included in LRA table 2.4-4 with aging management review results in LRA table 3.5.2-4.

Pipe supports and hangers are in scope of license renewal and subject to aging management review and are included in the structural aging management review as component type “component and piping supports”. This item is included in LRA table 2.4-4 with aging management review results in LRA table 3.5.2-4.

Couplings are in scope of license renewal and subject to aging management review and are included in LRA table 2.3.3-12 under the component type “piping” with aging management review results in LRA table 3.3.2-12.

Yard fire hydrants are in scope of license renewal and subject to aging management review and are included in LRA table 2.3.3-12 under the component type “valve body” with aging management review results in LRA table 3.3.2-12.

Water sprinklers are in scope of license renewal and subject to aging management review and are included in LRA table 2.3.3-12 under the component type “nozzle” with aging management review results in LRA table 3.3.2-12.

Hose standpipes are in scope of license renewal and subject to aging management review and are included in LRA table 2.3.3-12 under the component type “piping” with aging management review results in LRA table 3.3.2-12.

Floor drains for fire water are in scope of license renewal and subject to aging management review and are included in the Floor and Equipment Drainage aging management review in LRA table 2.3.3-10 under component type “piping” with aging management review results in LRA table 3.3.2-10, and also in section 2.3.3.19 Miscellaneous Auxiliary Systems in Scope for 10 CFR 54.4(a)(2) LRA table 2.3.3-19-20 under component type “piping” with aging management review results in LRA table 3.3.2-19-20.

Fire water systems associated with standby gas treatment system charcoal filters are in scope for license renewal and subject to aging management review as depicted on LRA drawing LRA-M-0035B-0 (D, 6).

Fire water systems associated with containment exhaust (cooling) system charcoal filters are in scope for license renewal and subject to aging management review as depicted on LRA drawing LRA-M-0035B-0 (B, 7).

Fire water supply filter housings in the GGNS fire water system that are subject to aging management review are included in LRA table 2.3.3-12 under the component type “strainer housing” with aging management review results in LRA table 3.3.2-12.

Dikes and curbs for oil spill confinement are in scope of license renewal and subject to aging management review and are included in the structural aging management review under component types “floor slabs” and “interior walls” (for concrete). They are included in LRA table 2.4-2 with aging management review results in LRA table 3.5.2-2.

RAI 2.3.3.13-1

The following LRA boundary drawings show the following fire protection systems/components as not within the scope of license renewal:

<u>LRA Drawing</u>	<u>Systems/Components</u>	<u>Location</u>
LRA-M-0035E	Pressure relief valves, piping, and components associated with carbon dioxide (CO ₂) fire suppression system	G3
LRA-M-0035F	Halon 1301 fire suppression system in:	
	Division III Switchgear Room	C4
	Emergency Remote Shutdown Panel	E4
	Room OC 405	G4
	Division I Switchgear Room	A6
	Control Cabinet Room	F6
	Room OC 406	B8
	Room OC 705	F8

Verify whether the fire protection systems/components listed above are in the scope of license renewal in accordance with 10 CFR 54.4(a) and whether they are subject to an AMR in accordance with 10 CFR 54.21(a)(1). If they are excluded from the scope of license renewal

and are not subject to an AMR, the staff requests that the applicant provide justification for the exclusion.

RAI 2.3.3.13-1 RESPONSE

The pressure relief valves, piping, and components on LRA-M-0035E location G-3 that are not highlighted are used to provide carbon dioxide to purge the main generator of hydrogen or air. This portion of the carbon dioxide system performs no license renewal intended function since it includes no equipment credited with fire prevention, detection, or mitigation in areas containing equipment important to safe operation of the plant or systems that contain plant components credited for safe shutdown following a fire per 10 CFR 50.48.

The portions of the Halon 1301 fire suppression system shown on LRA-M-0035F in the locations listed above are not in scope for license renewal since they include no equipment credited with fire prevention, detection, or mitigation in areas containing equipment important to safe operation of the plant or systems that contain plant components credited for safe shutdown following a fire per 10 CFR 50.48. As indicated in Note 3 of the drawing, the components were intended to serve Unit 2 and are not functional. This note is provided on the drawing for each line listed above.

RAI 2.5-1

There has been operating experience regarding the failure of cable tie-wraps caused by the age related brittleness of the plastic material. These cable tie-wraps would be considered long-lived passive components depending on whether they have a credited design function. In LRA Section 2.5, the electrical commodity groups subject to aging management review are described. Explain how Grand Gulf manages the aging of cable tie-wraps if they are credited in the plant design basis. In addition, justify why the cable tie-wraps are not included within the scope of license renewal.

RAI 2.5-1 RESPONSE

Cable tie-wraps utilized at GGNS have no license renewal intended functions as defined in 10 CFR 54.4(a).

At GGNS, electrical cable tie-wraps are used as an aid during cable installation to establish power cable spacing in cable trays. Once cables have been installed in trays, the cables own weight in the tray and the inherent rigidity of the cable conductors will maintain the spacing. Power cables are sized to carry currents well in excess of load requirements with margin considering worst case routing.

Electrical cable tie-wraps do not function as cable supports in raceway support analyses. Seismic qualification of cable trays does not credit the performance of electrical cable tie-wraps. Tie-wraps are not credited in GGNS seismic qualification of the cable tray support system. GGNS considered the potential effect on safety-related equipment of the failure of cable tie-wraps and concluded it is not credible that failure of tie-wraps could prevent satisfactory accomplishment of the applicable functions of the structure, systems, and components (SSC)s identified under 10 CFR 54.4(a)(1).

The functions of maintain spacing for power cable ampacity, maintaining stiffness in unsupported lengths of wire bundles to ensure minimum bending radius, and maintaining cables within vertical raceways are not intended functions of cable tie-wraps at GGNS. GGNS has no

current licensing basis requirements that cable tie-wraps remain functional during and following design-basis events. Cable tie-wraps do not meet any criteria found in 10 CFR 54.4(a)(1), 10 CFR 54.4(a)(2) or 10 CFR 54.4(a)(3). Therefore, cable tie-wraps are not included as an electrical commodity in the scope of license renewal.