

September 12, 2008

Mr. Thomas L. Williamson  
Manager, GGNS COLA Project  
Entergy Nuclear  
1340 Echelon Parkway  
Jackson, MS 39213

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 02 RELATED TO  
SRP SECTION 2.3.1, 2.3.4, and 2.3.5 FOR THE GRAND GULF COMBINED  
LICENSE APPLICATION

Dear Mr. Williamson:

By letter dated February 27, 2008, Entergy Operations Incorporated (EOI) submitted for approval a combined license application pursuant to 10 CFR Part 52. The U. S. Nuclear Regulatory Commission (NRC) staff is performing a detailed review of this application to enable the staff to reach a conclusion on the safety of the proposed application.

The NRC staff has identified that additional information is needed to continue portions of the review. The staff's request for additional information (RAI) is contained in the enclosure to this letter. To support the review schedule, you are requested to respond within 30 days of the date of this letter. If changes are needed to the safety analysis report, the staff requests that the RAI response include the proposed wording changes.

If you have any questions or comments concerning this matter, I can be reached at 301-415-2890 or by e-mail at [Andrea.Johnson@nrc.gov](mailto:Andrea.Johnson@nrc.gov).

Sincerely,

**/RA/**

Andrea M. Johnson, Project Manager  
ESBWR/ABWR Projects Branch 1  
Division of New Reactor Licensing  
Office of New Reactors

Docket No. 052-0024  
eRAI Tracking No. 1204, 1205, 1206

Enclosure:  
Request for Additional Information

September 12, 2008

Mr. Thomas L. Williamson  
Manager, GGNS COLA Project  
Entergy Nuclear  
1340 Echelon Parkway  
Jackson, MS 39213

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LICENSE APPLICATION

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Sincerely,  
**/RA/**  
Andrea M. Johnson, Project Manager  
ESBWR/ABWR Projects Branch 1  
Division of New Reactor Licensing  
Office of New Reactors

Docket No. 052-0024  
eRAI Tracking No. 1204, 1205, 1206  
Enclosure:  
Request for Additional Information  
Distribution:  
PUBLIC  
BSosa, NRO  
MTonacci, NRO  
BAbeywickrama, NRO  
AJohnson, NRO

CCox, NRO  
BHarvey, NRO  
SBrock, OGC  
NRO\_DNRL\_NGE2  
NRO\_DNRL\_NGE1

ADAMS Accession No. **ML082550663**

NRO-002

OFFICE	RSAC/TR	RSAC/BC	OGC	NGE1/PM	NGE2/L-PM
NAME	BHarvey	CCox	SBrock	AJohnson	MTonacci
DATE	09/04/08	09/05/08	09/10/08	09/08/08	09/12/08

\*Approval captured electronically in the electronic RAI system.

OFFICIAL RECORD COPY

Grand Gulf, Unit 3 COLA  
Entergy Operations, Inc.  
Docket No. 52-024

SRP Section: 02.03.01 - Regional Climatology

Application Section: FSAR 2.3.1

SRP Section: 02.03.04 - Short Term Atmospheric Dispersion Estimates for Accident Releases

Application Section: FSAR 2.3.4

SRP Section: 02.03.05 - Long-Term Atmospheric Dispersion Estimates for Routine Releases

Application Section: FSAR 2.0

## QUESTIONS

### **02.03.01-1**

Revise the FSAR to list the normal winter precipitation event, the extreme frozen winter precipitation event, and extreme liquid winter precipitation event as site characteristics in accordance with the Proposed Interim Staff Guidance (ISG) DC/COL-ISG-07, "Interim Staff Guidance on Assessment of Normal and Extreme Winter Precipitation Loads on the Roofs of Seismic Category I Structures" (ML081990438). Provide a basis for the chosen site parameter values.

### **02.03.01-2**

FSAR Table 2.0-201 lists a Unit 3 maximum 2% exceedance coincident wet bulb site characteristic value of 78°F (Sheet 4 of 25) and states that the maximum 2% exceedance non-coincident wet bulb value was not provided in the GGNS ESPA SSAR (Sheet 5 of 25). The staff believes that the 78°F value listed in FSAR Table 2.0-201 as a Unit 3 maximum 2% exceedance coincident wet bulb value is actually the Unit 3 maximum 2% exceedance non-coincident wet bulb value.

### **02.03.01-3**

FSAR Table 2.0-201 (Sheet 6 of 25) lists a Unit 3 maximum 0.4% exceedance coincident wet bulb site characteristic value of 80°F. The staff believes that the 80°F value listed in FSAR Table 2.0-201 as a Unit 3 maximum 0.4% exceedance coincident wet bulb value is actually the Unit 3 maximum 0.4% exceedance non-coincident wet bulb value.

### **02.03.01-4**

FSAR Table 2.0-201 (Sheet 6 of 25) states the Unit 3 maximum 1% exceedance coincident wet bulb site characteristic value of 80°F exceeds the corresponding ESBWR site parameter value of 79°F. Identify the ESBWR standard plant structures, systems, and components (SSCs) which used the maximum 1% exceedance coincident wet bulb site parameter value of 79°F as a design-basis and perform an evaluation demonstrating that these SSCs have sufficient margin to accommodate a 1°F change in the coincident wet bulb temperature.

### **02.03.01-5**

FSAR Table 2.0-201 (Sheet 7 of 25) lists Unit 3 maximum 0% exceedance coincident and non-coincident wet bulb site characteristic values of 81°F based on the worst (i.e., highest) 1-day value presented in the GGNS ESPA SSAR. These highest 1-day wet bulb values are inconsistent with ESBWR DCD Tier 2 Table 2.0-1 footnote 06 which states 0% exceedance values are based on conservative estimates of historical high and low (i.e., maximum hourly) values for potential sites.

10 CFR 52.79(a)(1)(iii) states, in part, that COL applications must identify the meteorological characteristics of the proposed site with appropriate consideration of the most severe of the natural phenomena that have been historically reported for the site and surrounding area and with sufficient margin for the limited accuracy, quantity, and period of time in which the historical data have been accumulated. In order to be compliant with 10 CFR 52.79(a)(1)(iii), the highest of either the 100-year return period or historic maximum coincident and wet bulb temperatures should be compared to the corresponding ESBWR 0% exceedance maximum ambient design temperature site parameters. Use of the 100-year return period temperatures are intended to cover situations where the historical data used to characterize a site may not extend over a significant time interval to capture cyclical events.

**02.03.04-1**

Provide a revised set of short-term control room and technical support center atmospheric dispersion factors utilizing the onsite receptor/source locations and ARCON96 inputs provided in Appendix 2A in Tier 2 to ESBWR DCD Revision 5.

**02.03.05-1**

Verify the following long term dispersion estimate GGNS Unit 3 site characteristic values presented in FSAR Table 2.0-201 are accurate as compared to the corresponding values presented in ESPA SSAR Table 2.3-143:

(a) Should the undepleted/no decay  $\chi/Q$  value at the nearest milk cow on Sheet 21 of 25 of FSAR Table 2.0-201 be listed as  $7.0E-8 \text{ sec/m}^3$  instead of  $4.7E-8 \text{ sec/m}^3$ ?

(b) Should the undepleted/no decay  $\chi/Q$  value at the nearest meat cow on Sheet 22 of 25 in FSAR Table 2.0-201 be listed as  $1.4E-7 \text{ sec/m}^3$  instead of  $1.1E-7 \text{ sec/m}^3$ ?