

October 6, 2008

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

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 08 RELATED TO  
SRP SECTION 11.2, 11.3, 11.4, and 11.5 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. 896, 1005, 902, 1068

Enclosure:  
Request for Additional Information

October 6, 2008

Mr. Thomas L. Williamson  
Manager, GGNS COLA Project  
Entergy Nuclear  
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Docket No. 052-0024  
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Enclosure:  
Request for Additional Information

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NRO-002

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NAME	SWilliams	TFrye	SBrock	MTonacci
DATE	08/19/08	09/18/08	09/26/08	10/6/08

\*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: 11.02 - Liquid Waste Management System

Application Section: 11.2.1 Design Bases

SRP Section: 11.03 - Gaseous Waste Management System

Application Section: 11.3.1

SRP Section: 11.04 - Solid Waste Management System

Application Section: 11.4.1 Design Basis

SRP Section: 11-05 Branch Technical Position - Postulated Radioactive Releases Due to a Waste Gas System Leak or Failure

Application Section: FSAR 11.5.4.6

## QUESTIONS

### 11.02-1

FSAR Section 11.2.1, STD SUP 11.2-1 includes, by reference, draft NEI Template 07-11 as the basis of the cost-benefit analysis in justifying the design of the LWMS. The NEI template presented a bounding envelope of population doses associated with liquid effluent releases, which, if met, would demonstrate compliance with ALARA cost-benefit requirements of Section II.D of Appendix I to Part 50. However, NEI Template 07-11 was withdrawn from further consideration by NEI. As a result, NEI Template 07-11 is no longer relevant and the applicant needs to develop a plant and site-specific cost-benefit analysis demonstrating compliance with Section II.D of Appendix I to Part 50. Accordingly, provide an updated cost-benefit analysis in FSAR Section 11.2.1 for the LWMS and provide sufficient information for the staff to evaluate the bases and assumptions used in the analysis and for conducting an independent confirmation of compliance with NRC regulations and guidance.

### 11.03-1

FSAR Section 11.3.1, GGNS SUP COL 11.3-1 incorporates by reference the current draft of NEI Template 07-11 as the basis of the cost-benefit analysis intended to justify the design of the GWMS. NEI, however, withdrew NEI Template 07-11 from further consideration. As a result, NEI Template 07-11 is no longer relevant. Accordingly, please provide an updated plant- and site-specific cost-benefit analysis in FSAR Section 11.3.1 for the GWMS. This cost/benefit analysis should provide sufficient information for the staff to evaluate the bases and assumptions used in the analysis and to conduct an independent confirmation of compliance with NRC regulations and guidance.

### 11.04-1

FSAR Section 11.4.1, STD COL 11.4-4-A states that the proposed plant will not utilize temporary low-level radioactive waste storage facilities to support plant operation. The ESBWR DCD, however, provides the capacity to store the amount of low-level radioactive waste that could be generated in 6 months of operation. Accordingly, the staff requests the applicant to describe the facilities planned for long-term storage of low-level radioactive wastes projected to be generated during the operation of Grand Gulf Unit 3, and the operational program addressing the long-term management and storage of such wastes using the guidance of Regulatory Guide 1.206 and Section 11.4 of the Standard Review Plan (NUREG-0800, Rev. 3).

## 11-05 Branch Technical Position-1

FSAR Section 11.5.4.6, on process and effluent monitoring and sampling, presents information in Table 11.5-201 on sampling for several Grand Gulf Unit 3 plant systems, including the plant service water system (item 2), storm drains and cooling tower blowdown (item 11), and sanitary waste water (item 14). Footnotes to the table appear internally inconsistent in describing sampling provisions and where the supporting information may be found in the DCD and/or FSAR.

The apparent inconsistencies are:

(a) Plant Service Water System (PSWS, line item 2) - For this system, footnotes No. 6 and 8 of Table 11.5-201 are provided in clarifying sampling provisions and how this sampling stream would be treated through the liquid waste management system (LWMS). However, a review of MFN 06-417 (Supp. 4) indicates that in response to DCD RAI 9.2-8 S02, footnote 8 is being replaced with footnote 4, but Table 11.5-201 does not reflect that change. Accordingly, update FSAR Table 11.5-201, line item 2 for the PSWS, to include the proper footnote citations. This information would ensure that such provisions are clearly identified in the FSAR and not likely to be omitted during the development of the sampling and analysis program for the plant specific Offsite Dose Calculation Manual in confirming compliance with liquid effluent concentration limits of Table 2 in Appendix B to Part 20 and numerical objectives of Appendix I to Part 50.

(b) Storm Drains and Cooling Tower Blowdown (line item 11) – For these systems, footnote No. 4 of Table 11.5-201 does not refer to specific sampling provisions for these two systems, such as sampling points or installation of automatic composite samplers. FSAR Sections 11.5, 9.2, and 10.4 do not appear to make such provisions for either system. Accordingly, confirm whether this observation is correct and update FSAR Sections 11.5, 9.2, and 10.4 by providing specific references to DCD or FSAR sections where this information is presented, and, if not, supplement the appropriate FSAR sections with additional design details. This information would ensure that such provisions are clearly identified in the FSAR and not likely to be omitted during the development of the sampling and analysis program for the plant specific Offsite Dose Calculation Manual in confirming compliance with liquid effluent concentration limits of Table 2 in Appendix B to Part 20 and numerical objectives of Appendix I to Part 50.

(c) Sanitary Waste Water System (line item 14) – For this system, footnote No. 4 of Table 11.5-201 does not refer to specific sampling provision for this system. Accordingly, add a new footnote to the system's line item 14 (Col. 3 in Table 11.5-201) indicating that grab samples can be obtained from the sewage treatment plant for the purpose of detecting the presence of radioactivity. This information would ensure that such provisions are clearly identified in the FSAR and not likely to be omitted during the development of the sampling and analysis program for the plant specific Offsite Dose Calculation Manual in confirming compliance with liquid effluent concentration limits of Table 2 in Appendix B to Part 20 and numerical objectives of Appendix I to Part 50.